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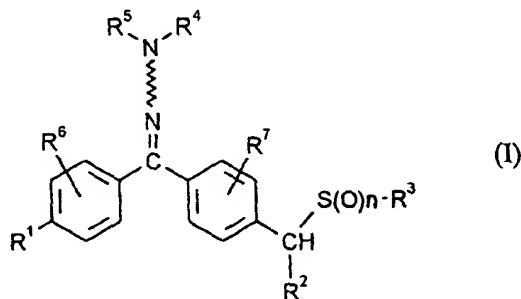
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(54) Benzophenone hydrazone derivatives as insecticides

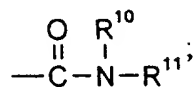
(57) Summary Of The Invention

Novel benzophenonehydrazone derivatives represented by the formula (I):



wherein, R<sup>1</sup> is halogen; R<sup>2</sup> is hydrogen or C<sub>1-4</sub> alkyl; R<sup>3</sup> is cyano, optically substituted C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>3-4</sub> alkynyl, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl; R<sup>4</sup> is hydrogen, phenyl, optionally substituted C<sub>1-6</sub> alkyl, optionally substituted C<sub>2-8</sub> alkenyl, -CO-R<sup>8</sup>, -CO-O-R<sup>9</sup> or

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R<sup>5</sup> is hydrogen, formyl, phenyl, optionally substituted C<sub>1-8</sub> alkyl, optionally substituted C<sub>2-8</sub> alkenyl, optionally substituted C<sub>3-8</sub> alkynyl, optionally substituted C<sub>1-8</sub> alkyl-carbonyl, optionally substituted C<sub>1-6</sub> alkyl-oxalyl, optionally substituted C<sub>1-8</sub> alkoxy-carbonyl, optionally substituted C<sub>1-8</sub> alkoxy-oxalyl, optionally substituted C<sub>3-8</sub> cycloalkyl-carbonyl, optionally substituted C<sub>2-8</sub> alkenyl-carbonyl or optionally substituted benzoyl; R<sup>6</sup> is hydrogen or halogen; R<sup>7</sup> is hydrogen, halogen or C<sub>1-2</sub> alkyl, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl; n is 0, 1 or 2, provided that n is 0 when R<sup>3</sup> is cyano, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl,  $\sum$  is a single bond of Anti form or of Syn form.

The benzophenonehydrazone derivatives of the formula (I) have excellent insecticidal activities.

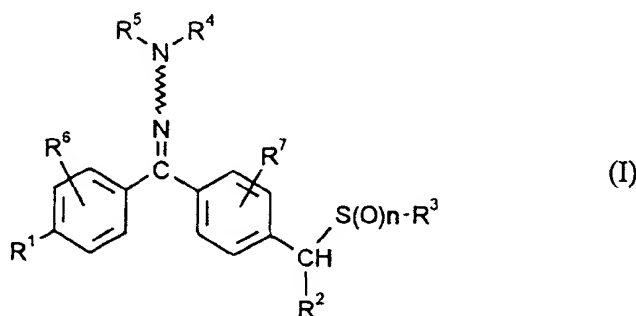
## Description

The present invention relates to novel benzophenone hydrazone derivatives, to processes for the preparation thereof and to their use as insecticides, as well as to novel intermediates for their preparation and to processes for their preparation.

It has been already known that certain 4-substituted-4'-alkylsulfonyloxybenzophenone hydrazone derivatives have insecticidal activities (see British Crop Protection Conference Pests and Diseases 1984, Vol.2, 405 - 412, Japanese Patent Kokai Publications Sho 54-122261 (=EP-3913-A, USP4394387), Sho 56-45452 (=EP-26040-A, USP4331680, USP4432994), Hei 2-138246 (=EP-355832-A, USP4980373), Hei 3-74356 (DERWENT AN-91-136915), Hei 4-1173 (DERWENT AN-92-053936), Hei 6-25134(=CA2094010), Hei 6-184079 (=USP5340837, USP5405871), Hei 7-149708(=EP-647622), Hei 7-242618(=CA2139465) and Hei 7-247261 (=DERWENT AN=95-363559)).

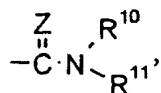
However, the level and/or duration of activity of these known compounds are not entirely satisfactory in all fields of application, in particular against certain organisms or when low concentrations are applied.

There have now been found novel benzophenone hydrazone derivatives of the formula (I):



wherein

- $R^1$  is halogen,  
 $R^2$  is hydrogen or  $C_{1-4}$  alkyl,  
 $R^3$  is cyano, optionally substituted  $C_{1-4}$  alkyl,  $C_{2-4}$  alkenyl or  $C_{3-4}$  alkynyl,  $C_{1-4}$  alkyl-carbonyl or  $C_{1-4}$  alkoxy-thiocarbonyl,  
 $R^4$  is hydrogen, phenyl, benzyl, optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{2-8}$  alkenyl,  $-CO-R^8$ ,  $-CO-O-R^9$  or

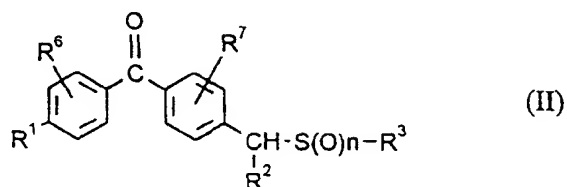


- $R^5$  is hydrogen, formyl, phenyl, optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{2-8}$  alkenyl, optionally substituted  $C_{3-8}$  alkynyl, optionally substituted  $C_{1-8}$  alkyl-carbonyl, optionally substituted  $C_{1-6}$  alkyl-oxalyl, optionally substituted  $C_{1-8}$  alkoxy-carbonyl, optionally substituted  $C_{1-8}$  alkoxy-oxalyl, optionally substituted  $C_{3-8}$  cycloalkyl-carbonyl, optionally substituted  $C_{2-8}$  alkenyl-carbonyl or optionally substituted benzoyl,  
 $R^6$  is hydrogen or halogen,  
 $R^7$  is hydrogen, halogen or  $C_{1-2}$  alkyl,  
 $n$  is 0, 1 or 2, provided that  $n$  is 0 when  $R^3$  is cyano,  $C_{1-4}$  alkyl-carbonyl or  $C_{1-4}$  alkoxy-thiocarbonyl,  
 $\sim$  is a single bond of Anti form or of Syn form,  
 $R^8$  is optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{2-8}$  alkenyl, optionally substituted phenyl, optionally substituted  $C_{3-8}$  cycloalkyl, optionally substituted  $C_{1-8}$  alkyl-carbonyl or optionally substituted  $C_{1-8}$  alkoxy-carbonyl, or hydrogen,  
 $R^9$  is optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{3-8}$  cycloalkyl, optionally substituted  $C_{2-8}$  alkenyl or optionally substituted  $C_{3-8}$  alkynyl,  
 $R^{10}$  is hydrogen or  $C_{1-4}$  alkyl,  
 $R^{11}$  is hydrogen, optionally substituted  $C_{1-4}$  alkyl or optionally substituted phenyl and,

Z is oxygen or sulfur.

The compounds of the formula (I), according to the invention, are obtained when

(a) in the case where  $R^5$  is hydrogen:  
compounds of the formula (II)

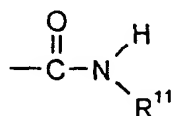


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^6$ ,  $R^7$  and  $n$  are defined as above, are reacted with compounds of the formula (III)

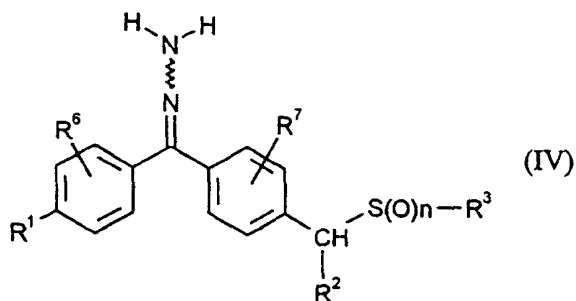


wherein  $R^4$  is defined as above; in the presence of an inert solvent, and, if appropriate, in the presence of an acid catalyst,  
or

(b) in the case where  $R^5$  is hydrogen and  $R^4$  is



and  $R^{11}$  is not hydrogen, then  $R^{11}$  is replaced by  $R^{12}$ , then  $R^{12}$  is optionally substituted  $C_{1-4}$  alkyl or optionally substituted phenyl:  
compounds of the formula (IV)

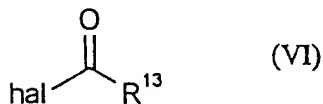


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^6$ ,  $R^7$  and  $n$  are defined as above, are reacted with compound of the formula (V)



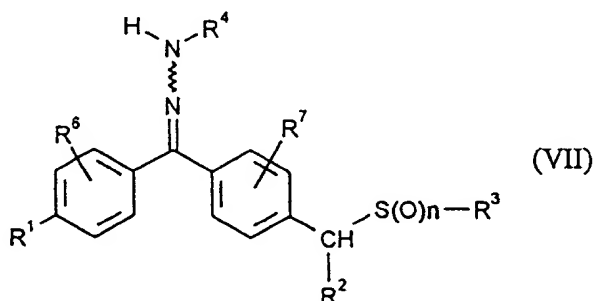
wherein R<sup>12</sup> is optionally substituted C<sub>1-4</sub> alkyl or optionally substituted phenyl, in the presence of an inert solvent,

(c) in the case where  $R^4$  is  $-CO-R^8$  or  $-CO-O-R^9$ , provided that  $R^8$  is not hydrogen, then  $R^8$  or  $-O-R^9$  is replaced by  $R^{13}$  the aforementioned compounds of the formula (IV) are reacted with compounds of the formula (VI)



wherein hal is chlorine or bromine and R<sup>13</sup> is R<sup>8</sup> or -O-R<sup>9</sup>, in the presence of an inert solvent, and if appropriate in the presence of an acid binder,

(d) in the case where R<sup>5</sup> is not hydrogen, then R<sup>5</sup> is replaced by R<sup>14</sup>: compounds of the formula (VII)

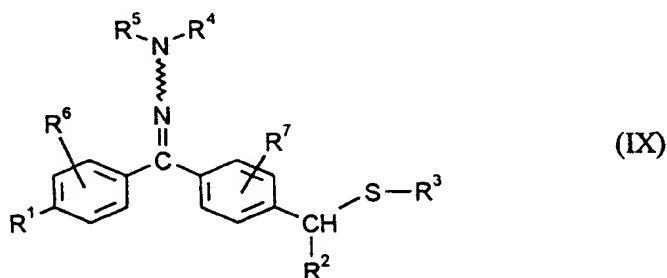


wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, R<sup>7</sup> and n have the same meaning as mentioned above, are reacted with compounds of the formula (VIII)



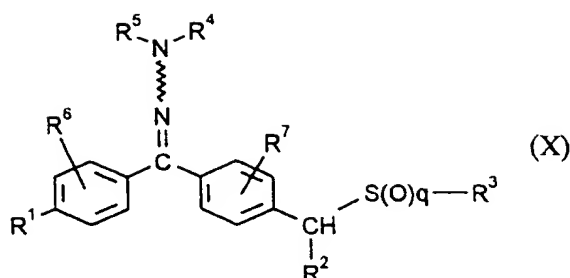
wherein hal and R<sup>14</sup> have the same meaning as mentioned above, in the presence of an inert solvent, and if appropriate in the presence of an acid binder,

or  
(e) in the case where n is 1:  
compounds the formula (IX)



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> have the same meaning as mentioned above, are oxidized in the presence of an inert solvent,

(f): in the case where  $n$  is 2:  
compounds of the formula (X)



15 wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  have the same meanings as mentioned above and  $q$  is 0 or 1, are oxidized in the presence of an inert solvent.

The benzophenone hydrazone derivatives of the formula (I) according to the invention exhibit powerful insecticidal action, especially against lepidoptera, coleoptera and soil insects.

20 According to the invention, unexpectedly, the benzophenone hydrazone derivatives of the formula (I) exhibit substantially, superior insecticidal action as compared with those of the compounds described in the above references which are similar to the compounds of the invention.

In the compounds of the formula (I) according to the invention, and the respective formulae representing their intermediates employed for the preparation of the compounds of formula (I), each of the halogen as well as the halogen parts of the haloalkyl, haloalkenyl and haloalkoxy represent fluorine, chlorine, bromine and iodine, preferably fluorine, chlorine or bromine.

25 Alkyl represents, for example, methyl, ethyl, propyl, isopropyl, *n*-(iso-, sec- or tert-)butyl, *n*-(iso-, sec-, tert- or neo-)pentyl and *n*-(iso-, sec-, tert- or neo-)hexyl, preferably, methyl, ethyl, propyl, isopropyl and *n*-(iso-, sec- or tert-)butyl.

Alkenyl represents, for example, vinyl, allyl, isopropenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 2- (or 3-)butenyl, 2-(3- or 4-)pentenyl.

30 Alkynyl represents, for example, propargyl.

Phenyl and the phenoxy may optionally be substituted by one or more than one substituent. The substituent(s) of those are selected from the group consisting of halogen(fluorine, chlorine, bromine), cyano, nitro, alkyl (methyl, ethyl, propyl or isopropyl), haloalkyl(trifluoromethyl), alkoxy(methoxy, ethoxy), haloalkoxy (trifluoromethoxy) and alkylthio(methylthio).

35 Cycloalkyl represents, for example, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl. The cycloalkyl may optionally be substituted by  $C_{1-4}$  alkyl(methyl, ethyl, propyl, isopropyl and butyl).

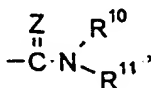
Alkoxy represents, for example, methoxy, ethoxy, propoxy, isopropoxy, *n*-(iso-, sec- or tert-)butoxy, *n*-(iso-, sec-, tert- or neo-)pentoxy, *n*-(iso-, sec-, tert- or neo-)hexoxy.

40 Haloalkoxy represents the above mentioned alkoxy groups which are substituted with the same or different halogen atom(s) and is, for example, trifluoromethoxy.

Alkylthio represents, for example, methylthio, ethylthio, propylthio, isopropylthio, *n*-(iso-, sec- or tert-)butylthio, *n*-(iso-, sec-, tert- or neo-)pentylthio, *n*-(iso-, sec-, tert- or neo-)hexylthio.

Among the benzophenone hydrazone derivatives according to the invention, of the formula (I), preferred compounds are those in which

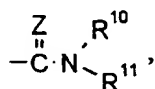
- 45
- $R^1$  is halogen,
  - $R^2$  is hydrogen or  $C_{1-3}$  alkyl,
  - $R^3$  is cyano,  $C_{1-4}$  alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano, methoxy, ethoxy and trimethylsilyl or is  $C_{2-3}$  alkenyl, propargyl, methyl-carbonyl, methoxy-thiocarbonyl or ethoxy-thiocarbonyl,
  - 50  $R^4$  is hydrogen,  $C_{1-4}$  alkyl,  $C_{2-4}$  alkenyl, phenyl, or is benzyl,  $-CO-R^8$ ,  $-CO-O-R^9$  or



- $R^5$  is hydrogen, formyl, phenyl,  $C_{1-6}$  alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano,  $C_{1-4}$  alkoxy,  $C_{1-4}$  alkylthio, hydroxycarbonyl,  $C_{1-4}$  alkoxy-carbonyl, phenyl, phenyl which is substituted by halogen and methoxyphenyl or is  $C_{2-6}$  alkenyl,  $C_{3-6}$  alkynyl,  $C_{1-6}$  alkyl-carbonyl,  $C_{1-6}$  halogenalkyl-carbonyl,  $C_{1-4}$  alkoxy- $C_{1-6}$  alkyl-carbonyl,  $C_{1-6}$  alkyl-oxalyl,  $C_{1-6}$  alkoxy-carbonyl which may be substituted by one or more than one substituent selected from the group consisting of  $C_{3-6}$  cycloalkyl and  $C_{1-4}$  alkoxy or is  $C_{1-6}$  alkoxy-oxalyl,  $C_{3-6}$  cycloalkyl-carbonyl which may be substituted by  $C_{1-4}$  alkyl,  $C_{2-6}$  alkenyl-carbonyl which may be substituted by phenyl or is benzoyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, nitro, cyano,  $C_{1-4}$  alkoxy and  $C_{1-4}$  alkylthio,
- $R^6$  is hydrogen or halogen,
- $R^7$  is hydrogen or halogen or  $C_{1-2}$  alkyl,
- $n$  is 0, 1 or 2, provided that  $n$  is 0 when  $R^3$  is cyano, methyl-carbonyl, methoxy-thiocarbonyl or ethoxy-thiocarbonyl,
- $\sum$  is a single bond of Anti form or of Syn form,
- $R^8$  is  $C_{1-6}$  alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano,  $C_{1-4}$  alkoxy,  $C_{1-4}$  alkoxy-carbonyl and phenoxy or is  $C_{2-6}$  alkenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen and phenyl, or is phenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, nitro, cyano,  $C_{1-4}$  alkyl,  $C_{1-4}$  alkoxy and  $C_{1-4}$  alkylthio, or is  $C_{3-6}$  cycloalkyl which may be substituted by  $C_{1-4}$  alkyl, or is  $C_{1-6}$  alkyl-carbonyl or  $C_{1-6}$  alkoxy-carbonyl, or hydrogen,
- $R^9$  is  $C_{1-6}$  alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, phenyl, 4-nitrophenyl, trimethylsilyl and  $C_{3-6}$  cycloalkyl, or is  $C_{3-6}$  cycloalkyl, or  $C_{2-6}$  alkenyl which may be substituted by phenyl or is  $C_{3-6}$  alkynyl,
- $R^{10}$  is hydrogen or  $C_{1-4}$  alkyl,
- $R^{11}$  is hydrogen,  $C_{1-4}$  alkyl which may be substituted by halogen or is phenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen,  $C_{1-4}$  alkoxy or  $C_{1-4}$  haloalkoxy and
- $Z$  is oxygen or sulfur.

Particularly preferred benzophenone hydrazone derivatives of the formula (I) are those in which

- $R^1$  is fluorine, chlorine, bromine or iodine,
- $R^2$  is hydrogen, methyl, ethyl or n-propyl,
- $R^3$  is cyano, methyl, ethyl, propyl, isopropyl, n-butyl, sec-butyl, cyanomethyl, fluoromethyl, chloromethyl, difluoromethyl, trifluoromethyl, 2-fluoroethyl, 2-chloroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3-fluoropropyl, 3-chloropropyl, 2,2,3,3-tetrafluoropropyl, methoxymethyl, ethoxymethyl, trimethylsilylmethyl, vinyl, allyl, propargyl, methyl-carbonyl or ethoxy-thiocarbonyl,
- $R^4$  is hydrogen, methyl, ethyl, propyl, isopropyl, n-butyl, tert-butyl, allyl, phenyl, benzyl,  $-\text{CO}-R^8$ ,  $-\text{CO}-O-R^9$  or



- $R^5$  is hydrogen, methyl, ethyl, propyl, isopropyl, n-butyl, tert-butyl, n-pentyl, n-hexyl, methoxymethyl, ethoxymethyl, methylthiomethyl, methylthioethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, 2-ethoxycarbonyl-ethyl, difluoromethyl, 2-chloroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, cyanomethyl, cyanoethyl, vinyl, allyl, propargyl, phenyl, benzoyl, cinnamoyl, benzyl, 4-chlorobenzoyl, 4-methoxybenzoyl, formyl, methylcarbonyl, ethylcarbonyl, propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 2,2,2-trifluoroethylcarbonyl, 5-bromopentylcarbonyl, methoxymethylcarbonyl, methyloxalyl, ethyloxalyl, propyloxalyl, isopropyloxalyl, n-butyl-oxalyl, methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl, butoxycarbonyl, methoxyoxalyl, ethoxyoxalyl, propoxyoxalyl, butoxyoxalyl, cyclopropylcarbonyl, 1-methylcyclopropylcarbonyl, cyclopropylmethoxycarbonyl or 2-methoxyethoxycarbonyl, hydroxycarbonylethyl,
- $R^6$  is hydrogen, fluorine or chlorine,
- $R^7$  is hydrogen, bromine or methyl,
- $n$  is 0, 1 or 2, provided that  $n$  is 0 when  $R^3$  is methyl-carbonyl or ethoxy-thiocarbonyl,
- $\sum$  is a single bond of Anti form or of Syn form,

- $R^8$  is methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, n-pentyl, n-hexyl, cyanomethyl, 2-chloroethyl, 3-chloropropyl, 4-chlorobutyl, methoxymethyl, 2-methoxyethyl, phenoxymethyl, ethoxycarbonylmethyl, vinyl, isopropenyl, 1-propenyl, 2,3,3-trifluoro-2-propenyl, phenyl, 4-chlorophenyl, 4-bromophenyl, 4-methylphenyl, 4-methoxyphenyl, styryl, cyclopropyl, cyclopentyl, cyclohexyl, 1-methylcyclopropyl, methylcarbonyl, ethylcarbonyl, propylcarbonyl, methoxycarbonyl, ethoxycarbonyl or propyloxycarbonyl, or hydrogen,
- $R^9$  is methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, tert-butyl, sec-butyl, n-pentyl, neo-pentyl, 2-methylbutyl, n-hexyl, trimethylsilylmethyl, allyl, cyclopentyl, cyclohexyl, 2-methyl-2-propenyl, propargyl, 2-chloroethyl, 2,2,2-trifluoroethyl, 2,2,3,3-tetrafluoropropyl, cyclopropylmethyl, cyclohexylmethyl, benzyl or 4-nitrobenzyl
- $R^{10}$  is hydrogen or methyl,
- $R^{11}$  is hydrogen, methyl, ethyl, 2-chloroethyl, phenyl, 2-chlorophenyl, 2-methoxyphenyl or 4-trifluoromethoxyphenyl, and
- Z is oxygen or sulfur.

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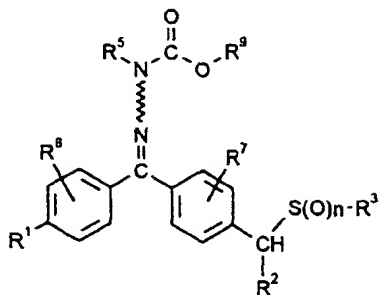
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


Specifically mentioned are the following compounds in Table 1 to Table 4.

Table 1



| R¹ | R² | R³      | n | R⁵ | R⁶  | R⁷ | R⁹       |
|----|----|---------|---|----|-----|----|----------|
| F  | H  | CH₃     | 0 | H  | H   | H  | CH₃      |
| F  | H  | CH₃     | 0 | H  | H   | H  | C₂H₅     |
| F  | H  | CH₃     | 0 | H  | 3-F | H  | CH₃      |
| F  | H  | CH₃     | 0 | H  | 3-F | H  | C₂H₅     |
| F  | H  | CH₃     | 1 | H  | H   | H  | CH₃      |
| F  | H  | CH₃     | 1 | H  | H   | H  | C₂H₅     |
| F  | H  | CH₃     | 1 | H  | H   | H  | n-C₃H₇   |
| F  | H  | CH₃     | 1 | H  | H   | H  | iso-C₃H₇ |
| F  | H  | CH₃     | 1 | H  | H   | H  | iso-C₄H₉ |
| F  | H  | CH₃     | 1 | H  | H   | H  | CH₂CF₃   |
| F  | H  | CH₃     | 2 | H  | H   | H  | C₂H₅     |
| F  | H  | CH₃     | 2 | H  | H   | H  | n-C₃H₇   |
| F  | H  | CH₃     | 2 | H  | H   | H  | iso-C₃H₇ |
| F  | H  | CH₃     | 2 | H  | H   | H  | iso-C₄H₉ |
| F  | H  | CH₃     | 2 | H  | H   | H  | CH₂CF₃   |
| F  | H  | C₂H₅    | 0 | H  | H   | H  | C₂H₅     |
| F  | H  | C₂H₅    | 0 | H  | 3-F | H  | C₂H₅     |
| F  | H  | C₂H₅    | 1 | H  | H   | H  | CH₃      |
| F  | H  | C₂H₅    | 1 | H  | H   | H  | C₂H₅     |
| F  | H  | C₂H₅    | 1 | H  | H   | H  | CH₂CF₃   |
| F  | H  | C₂H₅    | 1 | H  | H   | H  | iso-C₃H₇ |
| F  | H  | C₂H₅    | 2 | H  | H   | H  | CH₃      |
| F  | H  | C₂H₅    | 2 | H  | H   | H  | C₂H₅     |
| F  | H  | C₂H₅    | 2 | H  | H   | H  | n-C₃H₇   |
| F  | H  | C₂H₅    | 2 | H  | H   | H  | iso-C₄H₉ |
| F  | H  | C₂H₅    | 2 | H  | H   | H  | CH₂CF₃   |
| F  | H  | C₂H₅    | 2 | H  | 3-F | H  | C₂H₅     |
| F  | H  | CH₂CH₂F | 0 | H  | H   | H  | CH₃      |
| F  | H  | CH₂CF₃  | 0 | H  | H   | H  | CH₃      |
| F  | H  | CH₂CF₃  | 0 | H  | 3-F | H  | CH₃      |
| Cl | H  | CH₃     | 0 | H  | H   | H  | CH₃      |

Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup>    | R <sup>9</sup>  |
|----|----------------|----------------|-----------------|---|----------------|----------------|-------------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>5</sub> H <sub>11</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | neo-C <sub>5</sub> H <sub>11</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> CH(CH <sub>3</sub> )C <sub>2</sub> H <sub>5</sub>                     |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>6</sub> H <sub>13</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>7</sub> H <sub>15</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | n-C <sub>8</sub> H <sub>17</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> CH=CH <sub>2</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> C(CH <sub>3</sub> )=CH <sub>2</sub>                                   |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> C≡CH  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> CH <sub>2</sub> Cl  |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>                                      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 | CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>                                     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 |  |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H                 |  |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | 2-F               | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | 3-F               | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | 3-Cl              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | 3-Br              | C <sub>2</sub> H <sub>5</sub>   |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | 3-CH <sub>3</sub> | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-F            | H                 | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-F            | H                 | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H                 | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H                 | C <sub>2</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 | H              | 3-F            | H                 | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 3-F            | H                 | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 3-Cl           | H                 | CH <sub>3</sub>   |



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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-----------------|---|--|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | H  | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                                | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CHF <sub>2</sub>                               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>                   |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |



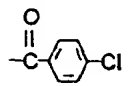
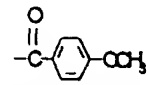
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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-----------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>                                       | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                       | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CHO   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CHO   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | CH <sub>3</sub>                   |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |





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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                     |
|----|----------------|----------------|-----------------|---|---|----------------|----------------|------------------------------------|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH=CHC <sub>6</sub> H <sub>5</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                    |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
| 30 | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub> |
| 35 | Cl             | H              | CH <sub>3</sub> | 1 | H   | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | 2-F            | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | 3-F            | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H   | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>      |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
| 50 | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |


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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                    |
|----|----------------|----------------|-----------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 10 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 15 | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 20 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 25 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 30 | Cl             | H              | CH <sub>3</sub> | 1 |   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub> | 1 |  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 1 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | CH <sub>3</sub>                   |
| 50 | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |




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Tabl 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                     |
|----|----------------|----------------|-----------------|---|---|----------------|----------------|------------------------------------|
| 5  | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>  |
| 10 | Cl             | H              | CH <sub>3</sub> | 2 | H   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 15 | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
| 20 | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 25 | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 30 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
| 35 | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
| 40 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
| 45 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
| 50 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 |  | H              | H              | CH <sub>3</sub>                    |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                                    |
|----|----------------|----------------|-------------------------------|---|---|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub>               | 2 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | CH <sub>3</sub>               | 2 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
| 10 | Cl             | H              | CH <sub>3</sub>               | 2 |  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>                 |
| 15 | Cl             | H              | CH <sub>3</sub>               | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                                   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>                 |
| 20 | Cl             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                                   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | CH <sub>3</sub>                                   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>                   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | n-C <sub>5</sub> H <sub>11</sub>                  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | H              | H              | CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub> |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | 2-F            | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | 3-F            | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H   | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>                     |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                                   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>                   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>                 |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>                   |




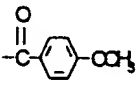
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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                    |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>4</sub> H <sub>9</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CHO  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | CH <sub>3</sub>                   |





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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-------------------------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>4</sub> H <sub>9</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 |    | H              | H              | CH <sub>3</sub>                   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 |   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-------------------------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 |  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 |  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

55

Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub>             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>6</sub> H <sub>5</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | 2-F            | H              | C <sub>2</sub> H <sub>5</sub>     |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | 3-F            | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CHO  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |

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Table 1 (continued)





|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                    |
|----|----------------|----------------|-----------------------------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 |  | H              | H              | CH <sub>3</sub>                   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 |  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 |  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 2 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | H   | H              | H              | CH <sub>3</sub>                   |
| 30 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
| 35 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | CH <sub>3</sub>                   |
| 40 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 45 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 1 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub>   | 2 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub> | 0 | H   | H              | H              | CH <sub>3</sub>                   |

Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                                    | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|---|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub>                 | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub>                 | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub>                 | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub>                 | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
| 10 | Cl             | H              | iso-C <sub>3</sub> H <sub>7</sub>                 | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | n-C <sub>4</sub> H <sub>9</sub>                   | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | sec-C <sub>4</sub> H <sub>9</sub>                 | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> OCH <sub>3</sub>                  | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
| 15 | Cl             | H              | CH <sub>2</sub> OCH <sub>3</sub>                  | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>    | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub> | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> F                                 | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 20 | Cl             | H              | CH <sub>2</sub> F                                 | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>2</sub> F                                 | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> F                                 | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F                                 | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 25 | Cl             | H              | CH <sub>2</sub> F                                 | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 30 | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | n-C <sub>5</sub> H <sub>11</sub>  |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | n-C <sub>6</sub> H <sub>13</sub>  |
| 35 | Cl             | H              | CHF <sub>2</sub>                                  | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>3</sub>                   |
| 40 | Cl             | H              | CHF <sub>2</sub>                                  | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CHF <sub>2</sub>                                  | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CF <sub>3</sub>                                   | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
| 50 | Cl             | H              | CF <sub>3</sub>                                   | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CF <sub>3</sub>                                   | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CF <sub>3</sub>                                   | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                    |
|----|----------------|----------------|-----------------------------------|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Cl             | H              | CF <sub>3</sub>                   | 0 | H                                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CF <sub>3</sub>                   | 0 | H                                  | H              | H              | n-C <sub>5</sub> H <sub>11</sub>  |
|    | Cl             | H              | CF <sub>3</sub>                   | 0 | H                                  | H              | H              | n-C <sub>6</sub> H <sub>13</sub>  |
| 10 | Cl             | H              | CH <sub>2</sub> Cl                | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 15 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
| 25 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 30 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 35 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
| 45 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 50 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup>  | R <sup>3</sup>                                     | n | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|-----------------|--|---|-------------------------------|----------------|----------------|-----------------------------------|
| 5  | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 10 | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | H                             | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 0 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 15 | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 20 | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 2 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> Cl                 | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> Cl                 | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F  | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 30 | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F  | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> H  | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>    | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Cl             | H               | CH=CH <sub>2</sub>                                 | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH=CH <sub>2</sub>                                 | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CH=CH <sub>2</sub>                 | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CH=CH <sub>2</sub>                 | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Cl             | H               | CH <sub>2</sub> CH=CH <sub>2</sub>                 | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> C=CH                               | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> C=CH                               | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> C=CH                               | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> C=CH                               | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Cl             | H               | CH <sub>2</sub> CN                                 | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | H               | CH <sub>2</sub> CN                                 | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CN                                 | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | H               | CH <sub>2</sub> CN                                 | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 50 | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                                    | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                                    | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                                    | 0 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |

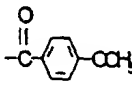
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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup>                  | R <sup>3</sup>  | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                                |
|----|----------------|---------------------------------|-----------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 0 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>               |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CF <sub>3</sub>               |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 1 | H                                 | H              | H              | CH <sub>3</sub>                               |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
| 10 | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 1 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>             |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CF <sub>3</sub>               |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>3</sub>                               |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
| 15 | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 2 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>             |
|    | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CF <sub>3</sub>               |
|    | Cl             | C <sub>2</sub> H <sub>5</sub>   | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>                               |
|    | Cl             | C <sub>2</sub> H <sub>5</sub>   | CH <sub>3</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
| 20 | Cl             | C <sub>2</sub> H <sub>5</sub>   | CH <sub>3</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Cl             | C <sub>2</sub> H <sub>5</sub>   | CH <sub>3</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Cl             | n-C <sub>3</sub> H <sub>7</sub> | CH <sub>3</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>                               |
| 25 | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>             |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>               |
| 30 | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>             |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>             |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>            |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | n-C <sub>5</sub> H <sub>11</sub>              |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | n-C <sub>6</sub> H <sub>13</sub>              |
| 35 | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> C≡CH                          |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub> |
|    | Br             | H                               | CH <sub>3</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CF <sub>3</sub>               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>                               |
| 40 | Br             | H                               | CH <sub>3</sub> | 0 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>                               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>             |
| 45 | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>             |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>             |
|    | Br             | H                               | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CF <sub>3</sub>               |
| 50 | Br             | H                               | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>                               |
|    | Br             | H                               | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>                 |
|    | Br             | H                               | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>               |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-----------------|---|---|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 10 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 15 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 | CHO   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 20 | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 30 | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 |  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Br             | H              | CH <sub>3</sub> | 0 | COCH=CHC <sub>6</sub> H <sub>5</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 45 | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>3</sub> | 1 | H   | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                    |
|----|----------------|----------------|-------------------------------|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | CH <sub>3</sub>               | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
| 10 | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | CH <sub>3</sub>               | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 20 | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 25 | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 30 | Br             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub>               | 2 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 40 | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 45 | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | CH <sub>3</sub>                   |
| 50 | Br             | H              | CH <sub>3</sub>               | 2 | COC <sub>6</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-------------------------------|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                    | H              | H              | CH <sub>3</sub>                   |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | sec-C <sub>4</sub> H <sub>9</sub> |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CHO                                | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-------------------------------|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | CH <sub>3</sub>                   |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>                   |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CH <sub>3</sub>                   |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |

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Tabl 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                     | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|------------------------------------|---|------------------------------------|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>      | 2 | COCH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 25 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub>    | 2 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 30 | Br             | H              | CH <sub>2</sub> CH=CH <sub>2</sub> | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CH=CH <sub>2</sub> | 2 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
| 35 | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>2</sub> F                  | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
| 40 | Br             | H              | CHF <sub>2</sub>                   | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CHF <sub>2</sub>                   | 0 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                   | 0 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CHF <sub>2</sub>                   | 0 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CHF <sub>2</sub>                   | 0 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 50 | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CHF <sub>2</sub>                   | 1 | H                                  | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CF <sub>3</sub>                    | 0 | H                                  | H              | H              | C <sub>2</sub> H <sub>5</sub>     |

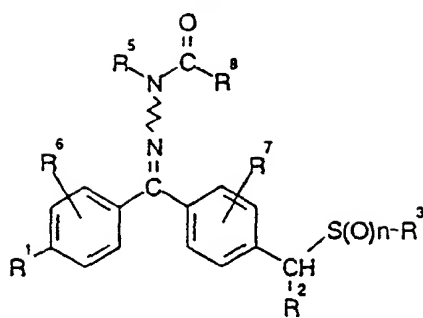
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Table 1 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> | R <sup>9</sup>                    |
|----|----------------|----------------|-----------------------------------|---|-------------------------------|----------------|----------------|-----------------------------------|
| 5  | Br             | H              | CF <sub>3</sub>                   | 0 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CF <sub>3</sub>                   | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CF <sub>3</sub>                   | 0 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 10 | Br             | H              | CF <sub>3</sub>                   | 0 | H                             | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | CH <sub>3</sub>                   |
| 15 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 20 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
| 30 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
| 35 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 2 | H                             | H              | H              | CH <sub>3</sub>                   |
| 40 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>                   |
| 45 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub> |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub> |
| 50 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 1 | H                             | H              | H              | CH <sub>2</sub> CF <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 2 | H                             | H              | H              | CH <sub>3</sub>                   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 2 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>     |







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Table 2












|  | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>                     |
|--|----------------|----------------|-----------------|---|----------------|----------------|----------------|------------------------------------|
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>3</sub>                    |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>    |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub> |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Cl |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN                 |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>      |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              |                                    |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              |                                    |
|  | F              | H              | CH <sub>3</sub> | 0 | H              | H              | H              |                                    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | CH <sub>3</sub>                    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>      |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub> |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Cl |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN                 |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>      |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              |                                    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              |                                    |
|  | F              | H              | CH <sub>3</sub> | 1 | H              | H              | H              |                                    |

Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|----------------|----------------|----------------|---|
| 5  | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 10 | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
| 15 | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              |    |
|    | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              |    |
| 20 | F              | H              | CH <sub>3</sub>               | 2 | H              | H              | H              |    |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 25 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 30 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 35 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              |  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              |  |
| 40 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H              | H              | H              |  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 45 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 50 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN  |

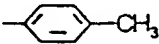
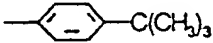


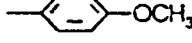
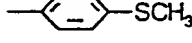
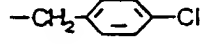
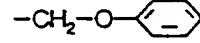




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|----------------|----------------|----------------|---|
| 5  | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              |    |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              |    |
| 10 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H              | H              | H              |    |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
| 15 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
| 25 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              |    |
|    | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              |   |
| 30 | F              | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | H   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | n-C <sub>5</sub> H <sub>11</sub>  |
| 45 | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | n-C <sub>6</sub> H <sub>13</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              |  |
| 50 | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub>               | 0 | H              | H              | H              |  |



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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH=CH <sub>2</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH=CHC <sub>6</sub> H <sub>5</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH=CHCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | C(=CH <sub>2</sub> )CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CF=CF <sub>2</sub>  |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CH <sub>2</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>                                      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |  |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |  |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 2-Cl           | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | 3-Cl           | H              | CH <sub>3</sub>   |



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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|-------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-Cl           | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-Cl           | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 2-F            | H              | CH <sub>3</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 2-F            | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 2-F            | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 2-F            | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-F            | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-F            | H              | C <sub>2</sub> H <sub>5</sub>   |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-F            | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-F            | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H                             | 3-F            | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              |   |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> CN  |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>3</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 45 | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | CH <sub>3</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | CH <sub>3</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|-------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 15 | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              |    |
| 20 | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | H              | H              |    |
| 25 | Cl             | H              | CH <sub>3</sub> | 1 | H                             | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                             | 3-Cl           | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CN  |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>               | H              | H              |  |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
| 10 | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |    |
| 15 | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 25 | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 30 | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|-------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 15 | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              |    |
| 20 | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                             | 2-Cl           | H              | C <sub>2</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 2 | H                             | 3-Cl           | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 35 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 40 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>               | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
| 45 | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |


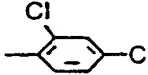




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 10 | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |    |
| 15 | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 25 | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |  |
| 45 | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>   |
|----|----------------|----------------|-------------------------------|---|-----------------|----------------|----------------|--|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | n-C <sub>5</sub> H <sub>11</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | n-C <sub>6</sub> H <sub>13</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | C <sub>6</sub> H <sub>5</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |   |
| 15 |                |                |                               |   |                 |                |                |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              |  |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH=CH <sub>2</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH=CHC <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH <sub>2</sub> CF=CF <sub>2</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH <sub>2</sub> CN   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H               | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                        |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | CH <sub>3</sub>  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | CH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>  |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | CH <sub>2</sub> CN   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              |    |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>3</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              |    |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CN  |




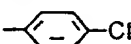

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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              |    |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |









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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 20 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 25 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 30 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |  |
| 35 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>3</sub>   |
| 40 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 45 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 50 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              |  |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H              | H              | H              |    |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 10 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H              | H              | H              |    |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 20 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 25 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |    |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |    |
|    | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 30 | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 35 | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 40 | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 45 | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              |  |
| 50 | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F               | 0 | H              | H              | H              |  |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
| 15 | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              |    |
| 20 | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 1 | H              | H              | H              |    |
| 25 | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 30 | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 35 | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              |  |
| 40 | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 45 | Cl             | H              | CH <sub>2</sub> F | 2 | H              | H              | H              |  |
|    | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>  | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |









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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>   | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              |    |
| 15 | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 0 | H              | H              | H              |    |
| 20 | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
| 30 | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              |  |
| 35 | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              |  |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 1 | H              | H              | H              |  |
| 40 | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
| 50 | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |








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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |    |
|    | Cl             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |    |
| 10 | Cl             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |    |
| 15 | Cl             | H              | CF <sub>3</sub>                   | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 25 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |    |
| 30 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |  |
| 35 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 45 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |  |
| 50 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |  |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>3</sub>   |
| 10 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 20 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |    |
| 25 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 30 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
| 40 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              |  |
| 45 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              |  |
| 50 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |








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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                   | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 10 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 15 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |    |
| 20 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 35 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |  |
| 40 | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 45 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |








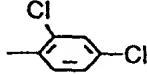

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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 10 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              |    |
| 15 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | H              | H              | H              |    |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 20 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 30 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              |  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              |  |
| 35 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              |  |
| 40 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
| 50 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |  |



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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup>  | R <sup>3</sup>                  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|-----------------|---------------------------------|---|----------------|----------------|----------------|---|
| 5  | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |    |
|    | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 10 | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |    |
|    | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                 | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                 | 2 | H              | H              | H              | CH <sub>3</sub>   |
| 15 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 20 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>5</sub> H <sub>11</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>6</sub> H <sub>13</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
| 30 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
| 35 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
| 40 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH=CH <sub>2</sub>  |
| 45 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH=CHCH <sub>3</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | C(=CH <sub>2</sub> )CH <sub>3</sub>   |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH=CHC <sub>6</sub> H <sub>5</sub>  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              |  |
| 50 | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H               | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>2</sub> CN  |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|---------------------------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub> | 0 | H                               | H              | H              | CH <sub>2</sub> OC <sub>6</sub> H <sub>5</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 20 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>3</sub>                 | H              | H              |    |
| 25 | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 35 | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 40 | Br             | H              | CH <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              |  |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 45 | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|--|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 10 | Br             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |    |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 15 | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CN  |
| 25 | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |    |
| 30 | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 35 | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | CH <sub>2</sub> CN  |
| 45 | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              |  |
| 50 | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              |  |
|    | Br             | H              | CH <sub>3</sub> | 1 | H  | H              | H              | C <sub>6</sub> H <sub>5</sub>   |






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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|---------------------------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub> | 1 | H                               | H              | H              |    |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 10 | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CN  |
| 20 | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                 | H              | H              |    |
| 25 | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 30 | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 35 | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 40 | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>   | H              | H              |  |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
| 45 | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |



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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |    |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 15 | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 25 | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |   |
| 30 | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 40 | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              |  |
| 45 | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              |  |
|    | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 50 | Br             | H              | CH <sub>3</sub> | 2 | H                                 | H              | H              |  |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|---------------------------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 15 | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              |    |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>   |
| 20 | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 25 | Br             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 35 | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>   | H              | H              |  |
| 40 | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 50 | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |    |
| 10 | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 20 | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 25 | Br             | H              | CH <sub>3</sub>               | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | n-C <sub>5</sub> H <sub>11</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | n-C <sub>6</sub> H <sub>13</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              |  |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H                                 | H              | H              |  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                  | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|---------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                 | H              | H              |    |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CN  |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>   | H              | H              |  |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub> | H              | H              |  |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | CH <sub>3</sub>   |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CN  |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H                                 | H              | H              |  |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CN  |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                   | H              | H              |    |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CN  |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H                                 | H              | H              |  |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CN  |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                   | H              | H              |    |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>     | H              | H              |    |
| 30 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 35 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 40 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 45 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              |  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |








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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup>                    | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|-----------------------------------|----------------|----------------|---|
| 5  | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | (CH <sub>2</sub> ) <sub>4</sub> Cl  |
| 10 | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub> | H              | H              |    |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CN  |
| 25 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |    |
| 30 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 0 | H                                 | H              | H              |  |
| 35 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CN  |
| 45 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              |  |
| 50 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              |  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H                                 | H              | H              | C <sub>6</sub> H <sub>5</sub>   |








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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 1 | H              | H              | H              |    |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 10 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |    |
| 20 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 25 | Br             | H              | n-C <sub>3</sub> H <sub>7</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 30 | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 35 | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              |  |
| 40 | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              |  |
|    | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 45 | Br             | H              | CHF <sub>2</sub>                | 0 | H              | H              | H              |  |
|    | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |









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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 10 | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              |    |
|    | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              |    |
| 15 | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 1 | H              | H              | H              |    |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | CH <sub>3</sub>   |
| 20 | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 25 | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 30 | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |  |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |  |
| 35 | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CHF <sub>2</sub>                  | 2 | H              | H              | H              |  |
|    | Br             | H              | CF <sub>3</sub>                   | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CF <sub>3</sub>                   | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 40 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 45 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 50 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |  |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              |    |
| 10 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 20 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |    |
| 25 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 1 | H              | H              | H              |   |
| 30 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
| 40 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |  |
| 45 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |  |
|    | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 50 | Br             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 2 | H              | H              | H              |  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | CH <sub>3</sub>   |








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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                   | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 15 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              |    |
| 20 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | H              | H              | H              |    |
| 25 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 35 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |  |
| 40 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 1 | H              | H              | H              |  |
| 45 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 50 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |






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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                   | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|----------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 10 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |    |
| 15 | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 20 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 30 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              |  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              |  |
| 35 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | H              | H              | H              |  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | CH <sub>3</sub>   |
| 40 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 45 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | CH <sub>2</sub> CN  |
| 50 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 1 | H              | H              | H              |  |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|----------------|----------------|----------------|---|
| 5  | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 10 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>3</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 15 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | iso-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 20 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | (CH <sub>2</sub> ) <sub>3</sub> Cl  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CN  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 25 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |    |
|    | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
| 30 | Br             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | H              | H              | H              |  |
|    | I              | H              | C <sub>2</sub> H <sub>5</sub>   | 0 | H              | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | I              | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | CH <sub>3</sub>   |
| 35 | I              | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | I              | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | I              | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | I              | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | I              | H              | CH <sub>3</sub>                 | 2 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 40 | I              | H              | CH <sub>3</sub>                 | 1 | H              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 1 | H              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 2 | H              | H              | H              | COCH <sub>3</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 0 | H              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 1 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 2 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 0 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 1 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub>               | 0 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 1 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>               | 2 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              |    |
| 15 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              |    |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | C <sub>6</sub> H <sub>5</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                         |
| 20 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              |    |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | iso-C <sub>3</sub> H <sub>7</sub>   |
|    | Br             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | H  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 1 | H  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Br             | H              | CH <sub>3</sub>               | 2 | H  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |


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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                                | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | CH <sub>3</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                     |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                      |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | H  | H              | H              | COCH <sub>3</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |  |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |







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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                                | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                                | H              | H              | COCH <sub>3</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | COCH <sub>3</sub>                              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | COCH <sub>3</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-------------------------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | H  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |    |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |    |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |    |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                                | H              | H              |  |
| 45 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |



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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|------------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | COCH <sub>3</sub>                  | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                     |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                      |
| 25 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              |   |
| 30 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              |  |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | H                                  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              |  |
| 35 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              |  |
| 40 | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 45 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | CH <sub>3</sub>                    | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | CH <sub>3</sub>                    | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | CH <sub>3</sub>                    | H              | H              | CH <sub>3</sub>   |
| 50 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 0 | CH <sub>3</sub>                    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>      | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|---------------------------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | CH <sub>3</sub>                                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | CH <sub>3</sub>                                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | CH <sub>3</sub>                                | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 1 | CH <sub>3</sub>                                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 15 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CH <sub>3</sub>   |
| 20 | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub>                 | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 35 | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 40 | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>3</sub>                                | H              | H              |  |
| 45 | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>3</sub>                                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub>                 | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub>                 | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |




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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>6</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>3</sub>                              | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                     |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                      |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | CH <sub>2</sub> CO <sub>2</sub> CH <sub>3</sub>                                       |
| 25 | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |    |
| 30 | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |  |
| 35 | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 0 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |  |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 50 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|------------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> OCH <sub>3</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 10 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>2</sub> SCH <sub>3</sub>   | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 15 | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                    | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                    | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                    | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | CH <sub>3</sub>                    | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>2</sub> H <sub>5</sub>    | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
| 35 | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | COCH <sub>3</sub>                  | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 40 | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                     |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                      |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | CH <sub>2</sub> CO <sub>2</sub> CH <sub>3</sub>                                       |
| 45 | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              |  |
| 50 | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 1 | H                                  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |





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Table 2 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                                 | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|--|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | iso-C <sub>3</sub> H <sub>7</sub>              | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 1 | n-C <sub>3</sub> H <sub>7</sub>                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 15 | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              |    |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | C <sub>2</sub> H <sub>5</sub>                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 20 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
| 30 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> OCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
| 35 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>2</sub> SCH <sub>3</sub>               | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
| 40 | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              |  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | CH <sub>3</sub>                                | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
| 45 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
| 50 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>2</sub> H <sub>5</sub>                | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n             | H              | H              | C <sub>2</sub> H <sub>5</sub>   |

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Table 2 (continued)

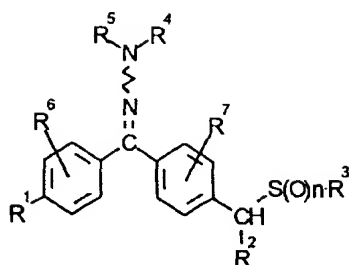
|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | R <sup>8</sup>  |
|----|----------------|----------------|-----------------|---|------------------------------------|----------------|----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
| 10 | Cl             | H              | CH <sub>3</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | C <sub>2</sub> H <sub>5</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | CH <sub>2</sub> OCH <sub>3</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | CH <sub>3</sub>   |
| 15 | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>3</sub> H <sub>7</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | n-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | COCH <sub>3</sub>                  | H              | H              | tert-C <sub>4</sub> H <sub>9</sub>  |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | (CH <sub>2</sub> ) <sub>5</sub> Br  |
| 20 | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> H                                     |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>                                      |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | CH <sub>2</sub> CO <sub>2</sub> CH <sub>3</sub>                                       |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>   |
| 25 | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              |    |
| 30 | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              |   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | H                                  | H              | H              | sec-C <sub>4</sub> H <sub>9</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              |  |
| 35 | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | iso-C <sub>3</sub> H <sub>7</sub>  | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              |  |
| 40 | Cl             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              | COCH <sub>3</sub>   |
|    | Cl             | H              | CH <sub>3</sub> | 2 | n-C <sub>3</sub> H <sub>7</sub>    | H              | H              | CO <sub>2</sub> CH <sub>3</sub>   |

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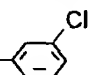
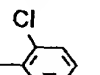
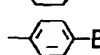
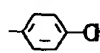
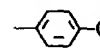
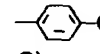
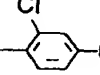
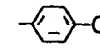
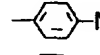
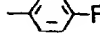
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Table 3



|    | $R^1$ | $R^2$ | $R^3$    | $n$ | $R^4$          | $R^5$  | $R^6$ | $R^7$ |
|----|-------|-------|----------|-----|----------------|--------|-------|-------|
| 15 | Br    | H     | $C_2H_5$ | 0   | H              | H      | H     | H     |
|    | Br    | H     | $C_2H_5$ | 0   | tert- $C_4H_9$ | H      | H     | H     |
|    | Br    | H     | $C_2H_5$ | 2   | H              | H      | H     | H     |
| 20 | Br    | H     | $C_2H_5$ | 1   | H              | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 0   | H              | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 0   | tert- $C_4H_9$ | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 2   | H              | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 2   | $CH_3$         | $CH_3$ | H     | H     |
| 25 | Br    | H     | $CH_3$   | 2   | $CH_3$         | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 2   | $C_6H_5$       | H      | H     | H     |
|    | Br    | H     | $CH_3$   | 2   |                | H      | H     | H     |
| 30 | Br    | H     | $CH_3$   | 1   | H              | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 0   | H              | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 0   | tert- $C_4H_9$ | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 2   | H              | H      | H     | H     |
| 35 | Cl    | H     | $C_2H_5$ | 2   | $CH_3$         | $CH_3$ | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 2   | $CH_3$         | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 2   | $C_6H_5$       | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 2   |                | H      | H     | H     |
| 40 | Cl    | H     | $C_2H_5$ | 2   |                | H      | H     | H     |
|    | Cl    | H     | $C_2H_5$ | 1   | H              | H      | H     | H     |
|    | Cl    | H     | $CH_3$   | 0   | H              | H      | H     | H     |
| 45 | Cl    | H     | $CH_3$   | 0   | tert- $C_4H_9$ | H      | H     | H     |
|    | Cl    | H     | $CH_3$   | 2   | H              | H      | H     | H     |
|    | Cl    | H     | $CH_3$   | 2   | $CH_3$         | H      | H     | H     |
|    | Cl    | H     | $CH_3$   | 2   | iso- $C_3H_7$  | H      | H     | H     |
| 50 | Cl    | H     | $CH_3$   | 2   | $CH_2CH=CH_2$  | H      | H     | H     |
|    | Cl    | H     | $CH_3$   | 2   | $CH_3$         | $CH_3$ | H     | H     |
|    | Cl    | H     | $CH_3$   | 2   | n- $C_4H_9$    | H      | H     | H     |

Table 3 (continued)

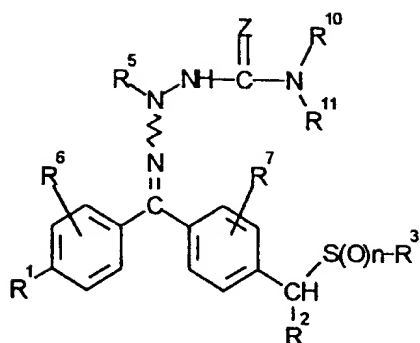
|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>4</sup>  | R <sup>5</sup>                | R <sup>6</sup> | R <sup>7</sup> |
|----|----------------|----------------|-----------------------------------|---|---|-------------------------------|----------------|----------------|
| 5  | Cl             | H              | CH <sub>3</sub>                   | 2 | CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>                                       | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 | CH <sub>3</sub>   | C <sub>6</sub> H <sub>5</sub> | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 | C <sub>6</sub> H <sub>5</sub>   | H                             | H              | H              |
| 10 | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
| 15 | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
| 20 | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
| 25 | Cl             | H              | CH <sub>3</sub>                   | 2 |    | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |   | H                             | H              | H              |
| 30 | Cl             | H              | CH <sub>3</sub>                   | 2 |  | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 2 |  | H                             | H              | H              |
|    | Cl             | H              | CH <sub>3</sub>                   | 1 | H   | H                             | H              | H              |
| 35 | Cl             | H              | CHF <sub>2</sub>                  | 0 | H   | H                             | H              | H              |
|    | Cl             | H              | CHF <sub>2</sub>                  | 1 | H   | H                             | H              | H              |
|    | Cl             | H              | CF <sub>3</sub>                   | 0 | H   | H                             | H              | H              |
|    | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | H   | H                             | H              | H              |
| 40 | Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H   | H                             | H              | H              |
|    | Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H   | H                             | H              | H              |

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
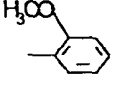

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Table 4

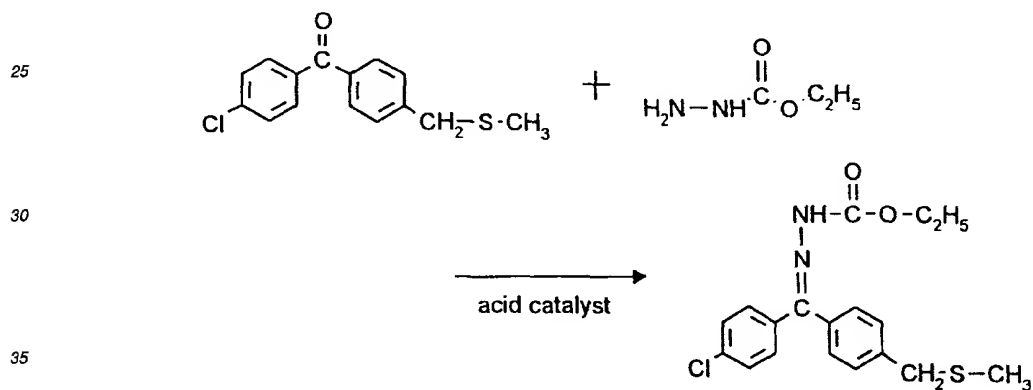


| R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | Z | R <sup>10</sup> | R <sup>11</sup>                    |
|----------------|----------------|-----------------------------------|---|----------------|----------------|----------------|---|-----------------|------------------------------------|
| Br             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | C <sub>6</sub> H <sub>5</sub>      |
| Br             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | H                                  |
| Br             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | S | H               | H                                  |
| Br             | H              | CH <sub>3</sub>                   | 1 | H              | H              | H              | O | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | H              | H              | H              | O | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 0 | H              | H              | H              | S | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | O | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CH <sub>2</sub> F | 0 | H              | H              | H              | S | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | O | H               | H                                  |
| Cl             | H              | CH <sub>2</sub> CHF <sub>2</sub>  | 0 | H              | H              | H              | S | H               | H                                  |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | S | CH <sub>3</sub> | CH <sub>3</sub>                    |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | C <sub>2</sub> H <sub>5</sub>      |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               |                                    |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               |                                    |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | S | H               | C <sub>6</sub> H <sub>5</sub>      |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | C <sub>6</sub> H <sub>5</sub>      |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | CH <sub>2</sub> CH <sub>2</sub> Cl |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | CH <sub>3</sub>                    |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | S | H               | CH <sub>3</sub>                    |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | O | H               | H                                  |
| Cl             | H              | CH <sub>3</sub>                   | 0 | H              | H              | H              | S | H               | H                                  |
| Cl             | H              | CH <sub>3</sub>                   | 2 | H              | H              | H              | O | H               | C <sub>2</sub> H <sub>5</sub>      |
| Cl             | H              | CH <sub>3</sub>                   | 2 | H              | H              | H              | S | H               | H                                  |

Table 4 (continued)

|    | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | Z | R <sup>10</sup> | R <sup>11</sup>   |
|----|----------------|----------------|-----------------|---|----------------|----------------|----------------|---|-----------------|---|
| 5  | Cl             | H              | CH <sub>3</sub> | 1 | H              | H              | H              | S | H               | H   |
| 10 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | O | H               |  |
|    | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | O | H               |  |
| 15 | Cl             | H              | CH <sub>3</sub> | 0 | H              | H              | H              | S | H               |  |

20 In process (a), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone and ethyl carbazate are used as the starting materials, the reaction is illustrated by the following equation:

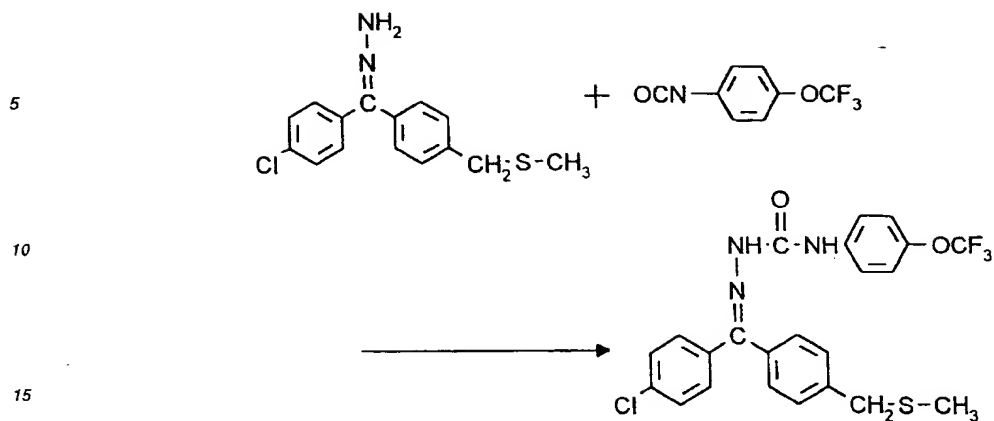


40 In process (b), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone hydrazone and 4-trifluoro-methoxyphenyl isocyanate are used as the starting materials, the reaction is illustrated by the following equation:

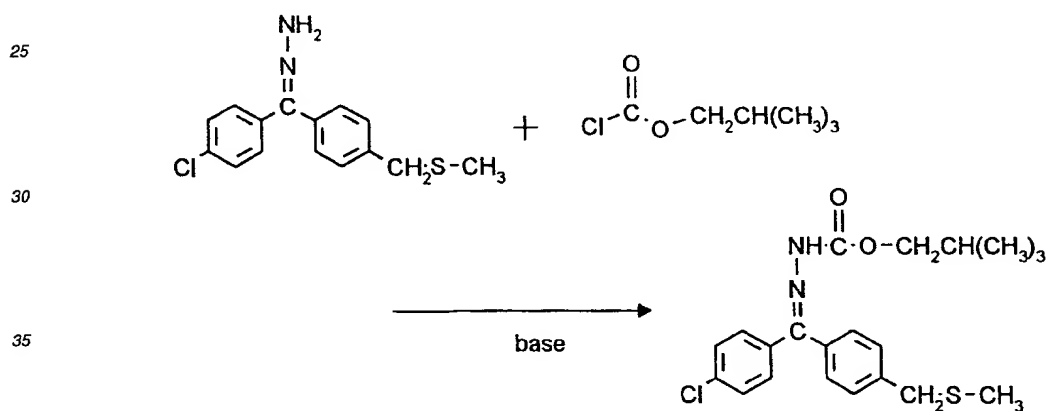
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20 In process (c), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone hydrazone and isobutyl chlorocarbonate are used as the starting materials, the reaction is illustrated by the following equation:

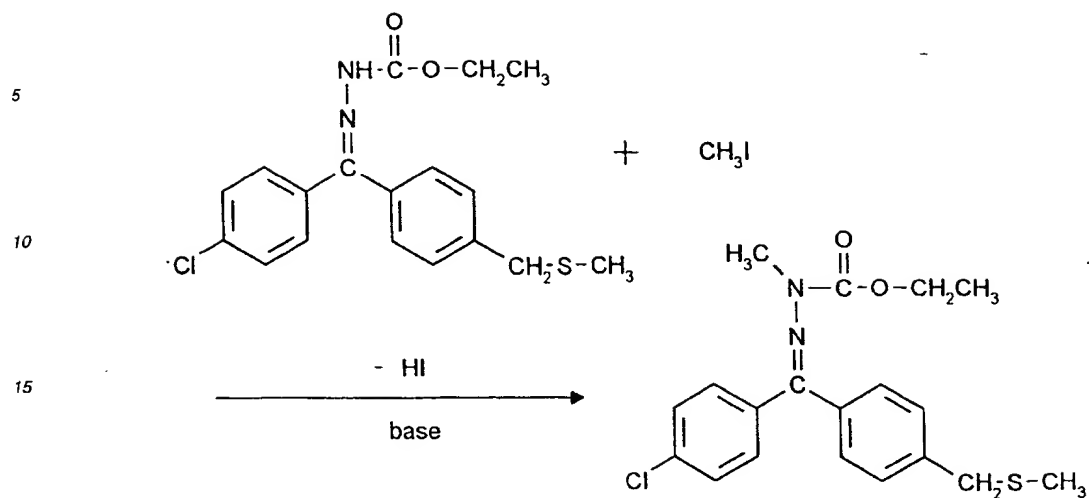


45 In process (d), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone and methyl iodide are used as the starting materials, the reaction is illustrated by the following equation:

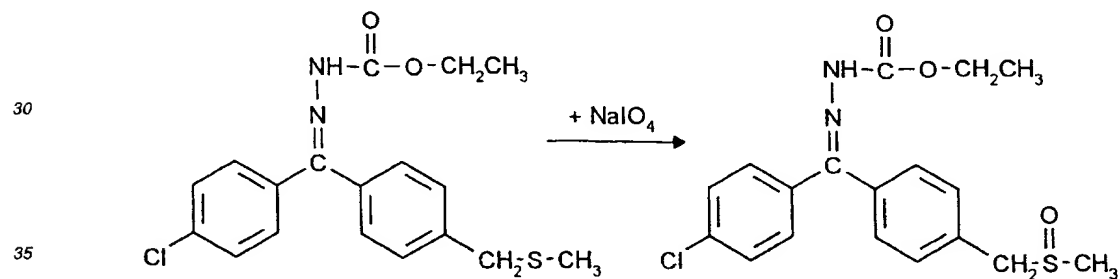
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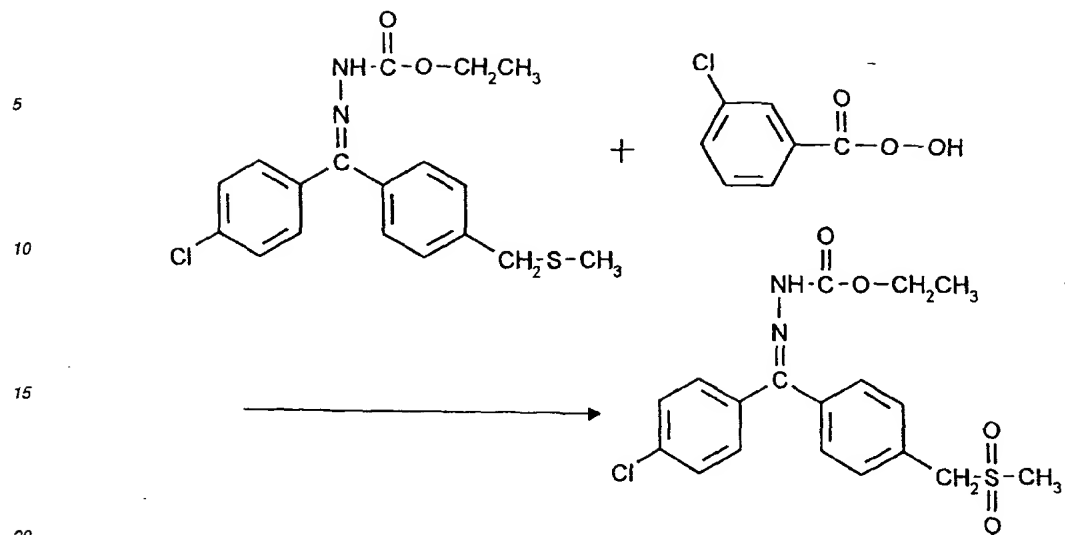
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25 In process (e), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone is oxidized by sodium periodate, the reaction is illustrated by the following equation:



40 In process (f), if, for example, 4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone is oxidized by m-chloroperbenzoic acid, the reaction is illustrated by the following equation:

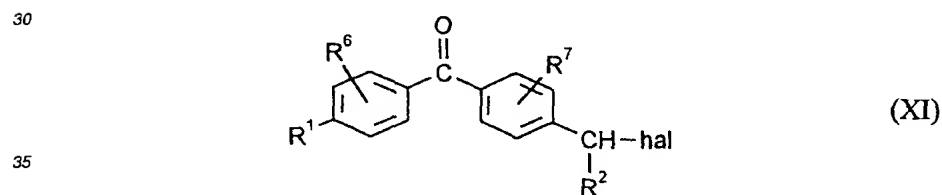


25 In process (a), the compounds of the formula (II) mean compounds based on the above definitions of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>6</sup>, R<sup>7</sup> and n, preferably compounds based on the above preferred definitions.

The starting compounds of the formula (II) are novel, and can be obtained by the following processes:

(g) in the case where n is 0:

compounds of the formula (XI)



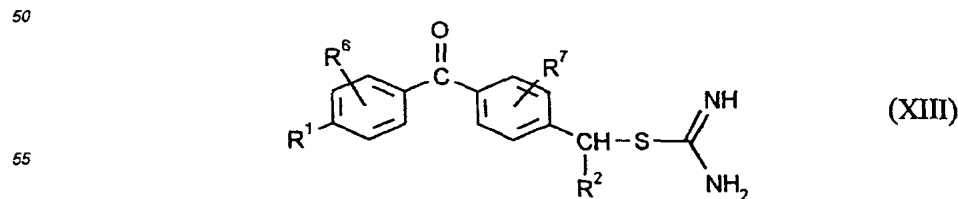
40 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>6</sup>, R<sup>7</sup> and hal have the same meaning mentioned above, are reacted with compounds of the formula (XII) or salts thereof



45 wherein R<sup>3</sup> has the same meaning mentioned above, in the presence of inert solvent, and if appropriate, in the presence of an acid binder, or

(h) in the case where n is 0:

compounds of the formula (XIII) or salts thereof



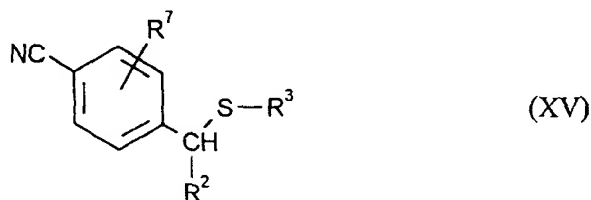
wherein  $R^1$ ,  $R^2$ ,  $R^6$  and  $R^7$  have the same meaning mentioned above, are reacted with compounds of the formula (XIV)



wherein  $R^3$  has the same meanings mentioned above, and  $R^{15}$  is chlorine, bromine or iodine; in the presence of an inert solvent, and if appropriate, in the presence of an acid binder, or

(j) in the case where  $n$  is 0 and  $R^1$  is fluorine or chlorine:

compounds of the formula (XV)



wherein  $R^2$ ,  $R^3$  and  $R^7$  have the same meaning mentioned above, are reacted with compounds of the formula (XVI)



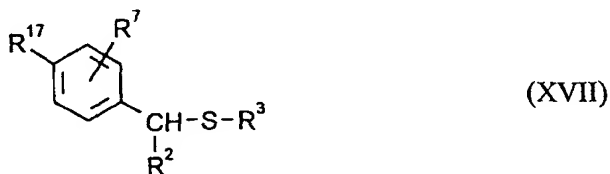
wherein  $R^6$  has the same meaning mentioned above and  $R^{16}$  is fluorine or chlorine, and

$R^{17}$  is lithium, magnesium bromide or magnesium iodide, in the presence of an inert solvent, and if appropriate, in the presence of an acid binder,

or

(k) in the case where  $n$  is 0:

compounds of the formula (XVII)



wherein  $R^2$ ,  $R^3$ ,  $R^7$  and  $R^{16}$  have the same meanings as mentioned above, are reacted with compounds of the formula (XVIII)



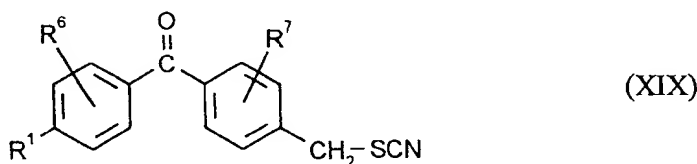
wherein  $R^1$  and  $R^6$  have the same meanings as mentioned above, in the presence of an inert solvent,

or

(m) in the case where  $n$  is 0,  $R^2$  is hydrogen and  $R^3$  is perfluoroalkyl, then  $R^3$  is replaced by  $R^{18}$ :  
compounds of the formula (XIX)

5

10



15 (XX)

wherein  $R^1$ ,  $R^6$  and  $R^7$  have same meaning as mentioned above, are reacted with compounds of the formula



20

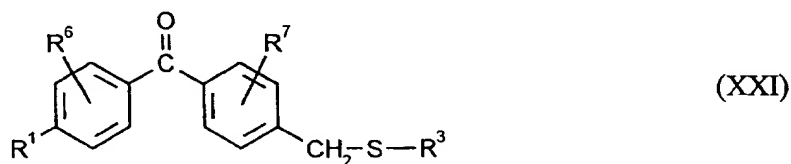
wherein  $R^{18}$  is  $C_{1-4}$  perfluoroalkyl,

in the presence of an inert solvent, and if appropriate, in the presence of an acid binder,

or

(n) in the case where  $n$  is 0 and  $R^2$  is  $C_{1-4}$  alkyl, then  $R^2$  is replaced by  $R^{19}$ : compounds of the formula (XXI)

25



30

wherein  $R^1$ ,  $R^3$ ,  $R^6$  and  $R^7$  have same meaning as mentioned above, are reacted with compounds of the formula



35

wherein  $\text{hal}$  has the same meaning as mentioned above and  $R^{19}$  is  $C_{1-4}$  alkyl,

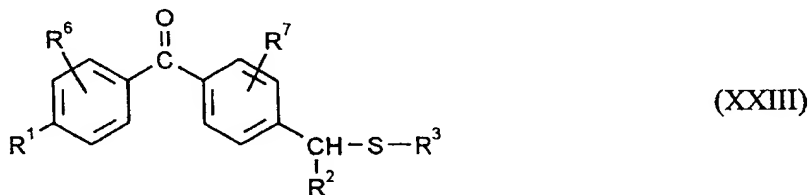
in the presence of an inert solvent, and if appropriate in the presence of an acid binder,

or

(p) in the case where  $n$  is 1:

40 compounds of the formula (XXIII)

45



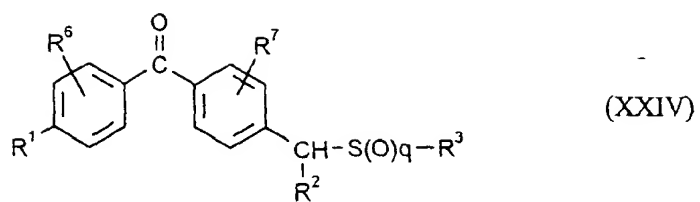
50

wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^6$  and  $R^7$  have the same meaning mentioned above, are oxidized, if appropriate, in the presence of an inert solvent,

or

(q) in the case where  $n$  is 2:

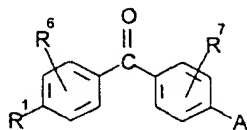
55 compounds of the formula (XXIV)



10 wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^6$ ,  $R^7$  and  $q$  have the same meaning mentioned above, are oxidized, if appropriate, in the presence of an inert solvent.

Examples of the compounds of the formula (II) are shown in Table 5.

Table 5



| R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup> | A  | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup>    | A   |
|----------------|----------------|----------------|--|----------------|----------------|-------------------|---|
| Br             | H              | H              | CH(CH <sub>3</sub> )SCH <sub>3</sub>                               | Cl             | H              | H                 | CH <sub>2</sub> S(CH <sub>2</sub> ) <sub>3</sub> F                  |
| Br             | H              | H              | CH(CH <sub>3</sub> )SO <sub>2</sub> CH <sub>3</sub>                | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                      |
| Br             | H              | H              | CH(CH <sub>3</sub> )SOCH <sub>3</sub>                              | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>3</sub> H <sub>7</sub> -iso                 |
| Br             | H              | H              | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                     | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>3</sub> H <sub>7</sub> -n                   |
| Br             | H              | H              | CH <sub>2</sub> SC <sub>3</sub> H <sub>7</sub> -n                  | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>4</sub> H <sub>9</sub> -n                   |
| Br             | H              | H              | CH <sub>2</sub> SCF <sub>3</sub>                                   | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>4</sub> H <sub>9</sub> -sec                 |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>3</sub>                   | Cl             | H              | H                 | CH <sub>2</sub> SCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>    |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CH=CH <sub>2</sub>                | Cl             | H              | H                 | CH <sub>2</sub> SCF <sub>2</sub> CF <sub>3</sub>                    |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> F                 | Cl             | H              | H                 | CH <sub>2</sub> SCF <sub>2</sub> CHF <sub>2</sub>                   |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CHF <sub>2</sub>                  | Cl             | H              | H                 | CH <sub>2</sub> SCF <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> F                                 | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> C≡CH                               |
| Br             | H              | H              | CH <sub>2</sub> SCH <sub>3</sub>                                   | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> H  |
| Br             | H              | H              | CH <sub>2</sub> SCHF <sub>2</sub>                                  | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>    |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>3</sub>                    |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n   | Cl             | H              | H                 | CH <sub>2</sub> SCH=CH <sub>2</sub>                                 |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH=CH <sub>2</sub>                 |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH=CH <sub>2</sub> | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F  | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> Cl                 |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CHF <sub>2</sub>   | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> F                  |
| Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CHF <sub>2</sub>                   |
| Br             | H              | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>                    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CN                                 |
| Br             | H              | H              | CH <sub>2</sub> SOC <sub>3</sub> H <sub>7</sub> -n                 | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> F                                  |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> CF <sub>3</sub>                  | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> Cl                                 |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> CH=CH <sub>2</sub>               | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> CH <sub>2</sub> F                | Cl             | H              | 2-Cl              | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> CHF <sub>2</sub>                 | Cl             | H              | 3-Cl              | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> F                                | Cl             | H              | 2-F               | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SOCH <sub>3</sub>                                  | Cl             | H              | 3-F               | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Br             | H              | H              | CH <sub>2</sub> SOCHF <sub>2</sub>                                 | Cl             | H              | 2-Br              | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Cl             | H              | H              | CH(C <sub>2</sub> H <sub>5</sub> )SCH <sub>3</sub>                 | Cl             | H              | 3-Br              | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Cl             | H              | H              | CH(C <sub>2</sub> H <sub>5</sub> )SO <sub>2</sub> CH <sub>3</sub>  | Cl             | H              | 3-CH <sub>3</sub> | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Cl             | H              | H              | CH(C <sub>2</sub> H <sub>5</sub> )SOCH <sub>3</sub>                | Cl             | H              | 2-CH <sub>3</sub> | CH <sub>2</sub> SCH <sub>3</sub>                                    |
| Cl             | H              | H              | CH(CH <sub>3</sub> )SCH <sub>3</sub>                               | Cl             | H              | H                 | CH <sub>2</sub> SCHF <sub>2</sub>                                   |
| Cl             | H              | H              | CH(CH <sub>3</sub> )SO <sub>2</sub> CH <sub>3</sub>                | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       |
| Cl             | H              | H              | CH(CH <sub>3</sub> )SOCH <sub>3</sub>                              | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n    |
| Cl             | H              | H              | CH(n-C <sub>3</sub> H <sub>7</sub> )SCH <sub>3</sub>               | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> C≡CH                |

Table 5 (continued)

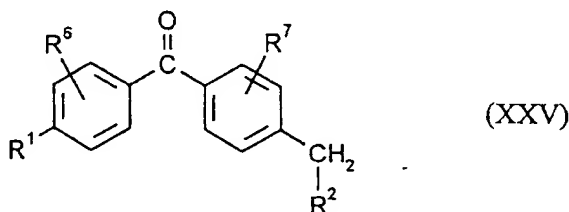
|    | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup>    | A  |  | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup> | A   |
|----|----------------|----------------|-------------------|--|--|----------------|----------------|----------------|---|
| 5  | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>                    |  | Cl             | 3-F            | H              | CH <sub>2</sub> SCH <sub>3</sub>                              |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH=CH <sub>2</sub>                 |  | Cl             | 2-Cl           | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F  |  | Cl             | 2-F            | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
| 10 | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl |  | Cl             | 3-F            | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl                 |  | Cl             | 2-Cl           | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F                  |  | Cl             | 2-F            | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> CHF <sub>2</sub>                   |  | Cl             | 3-F            | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 2-Cl           | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
| 15 | Cl             | H              | 2-Cl              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 2-F            | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
|    | Cl             | H              | 3-Cl              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 3-F            | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
|    | Cl             | H              | 2-F               | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 2-Cl           | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
|    | Cl             | H              | 3-F               | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 2-F            | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
| 20 | Cl             | H              | 2-Br              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 3-F            | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
|    | Cl             | H              | 3-Br              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                |
|    | Cl             | H              | 3-CH <sub>3</sub> | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SCH <sub>3</sub>                              |
|    | Cl             | H              | 2-CH <sub>3</sub> | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>                                    |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
| 25 | Cl             | H              | H                 | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>                                    |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOC <sub>2</sub> H <sub>7-n</sub>                                  |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> C≡CH   |  | Cl             | 3-Cl           | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CF <sub>3</sub>                                  |  | F              | H              | H              | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CH=CH <sub>2</sub>                               |  | F              | H              | H              | CH <sub>2</sub> SCH <sub>3</sub>                              |
| 30 | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl               |  | F              | H              | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CH <sub>2</sub> Cl                               |  | F              | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CH <sub>2</sub> F                                |  | F              | H              | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> CHF <sub>2</sub>                                 |  | F              | H              | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
| 35 | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>2</sub> F  |  | F              | 3-F            | H              | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCH <sub>3</sub>  |  | F              | 3-F            | H              | CH <sub>2</sub> SCH <sub>3</sub>                              |
|    | Cl             | H              | 2-Cl              | CH <sub>2</sub> SOCH <sub>3</sub>  |  | F              | 3-F            | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
|    | Cl             | H              | 3-Cl              | CH <sub>2</sub> SOCH <sub>3</sub>  |  | F              | 3-F            | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
| 40 | Cl             | H              | 2-F               | CH <sub>2</sub> SOCH <sub>3</sub>  |  | F              | 3-F            | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |
|    | Cl             | H              | 3-F               | CH <sub>2</sub> SOCH <sub>3</sub>  |  | F              | 3-F            | H              | CH <sub>2</sub> SOCH <sub>3</sub>                             |
|    | Cl             | H              | 2-Br              | CH <sub>2</sub> SOCH <sub>3</sub>  |  | I              | H              | H              | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                |
|    | Cl             | H              | 3-Br              | CH <sub>2</sub> SOCH <sub>3</sub>  |  | I              | H              | H              | CH <sub>2</sub> SCF <sub>3</sub>                              |
|    | Cl             | H              | 3-CH <sub>3</sub> | CH <sub>2</sub> SOCH <sub>3</sub>  |  | I              | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>3</sub>              |
| 45 | Cl             | H              | 2-CH <sub>3</sub> | CH <sub>2</sub> SOCH <sub>3</sub>  |  | I              | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> F            |
|    | Cl             | H              | H                 | CH <sub>2</sub> SOCHF <sub>2</sub>   |  | I              | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> CHF <sub>2</sub>             |
|    | Cl             | 2-Cl           | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                                     |  | I              | H              | H              | CH <sub>2</sub> SCH <sub>3</sub>                              |
|    | Cl             | 2-F            | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                                     |  | I              | H              | H              | CH <sub>2</sub> SCHF <sub>2</sub>                             |
| 50 | Cl             | 3-F            | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>                                     |  | I              | H              | H              | CH <sub>2</sub> SO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |
|    | Cl             | 2-Cl           | H                 | CH <sub>2</sub> SCH <sub>3</sub>   |  | I              | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>3</sub>               |
|    | Cl             | 2-F            | H                 | CH <sub>2</sub> SCH <sub>3</sub>   |  | I              | H              | H              | CH <sub>2</sub> SOC <sub>2</sub> H <sub>5</sub>               |

55

Table 5 (continued)

|    | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup> | A   |
|----|----------------|----------------|----------------|---|
| 5  | I              | H              | H              | CH <sub>2</sub> SOCH <sub>3</sub>   |
|    | Cl             | H              | H              | CH <sub>2</sub> SOCH <sub>3</sub>   |
|    | Cl             | H              | H              | CH <sub>2</sub> SCN   |
| 10 | Cl             | H              | H              | CH <sub>2</sub> SCSOCH <sub>3</sub>   |
|    | Cl             | H              | H              | CH <sub>2</sub> CSOC <sub>2</sub> H <sub>5</sub>                                  |
|    | Cl             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>                |
|    | Cl             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>               |
| 15 | Cl             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub> |
|    | Br             | H              | H              | CH <sub>2</sub> SCH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>                |
|    | Br             | H              | H              | CH <sub>2</sub> SOCH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>               |
| 20 | Br             | H              | H              | CH <sub>2</sub> SO <sub>2</sub> CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub> |

In the process (g), the starting materials of the formula (XI) are in part known, for example, 4-chloro-4'-chloromethylbenzophenone is described in Japanese Patent Kokoku Publication Sho 46-10164 together with production method thereof, or the starting materials of the formula (XI) can be obtained by halogenating benzophenones of the formula (XXV)



wherein, R<sup>1</sup>, R<sup>2</sup>, R<sup>6</sup> and R<sup>7</sup> have the same meanings as mentioned above, according to conventional methods, using, for example, N-bromosuccinimide or N-chlorosuccinimide as halogenating agent.

The compounds of the formula (XXV) can be obtained by a Friedel-Crafts reaction wherein substituted benzoyl halides and alkyl-substituted benzenes are used as starting materials, and aluminum chloride is used as a catalyst.

The compounds of the formula (XI) may be exemplified as follows:

- 45 4-chloro-4'-chloromethylbenzophenone,
- 4-chloromethyl-4'-fluorobenzophenone,
- 4-bromo-4'-chloromethylbenzophenone,
- 4-bromomethyl-4'-chlorobenzophenone,
- 4-bromomethyl-4'-fluorobenzophenone,
- 50 4-bromo-4'-bromomethylbenzophenone,
- 4-(1-bromoethyl)-4'-chlorobenzophenone,
- 4-(1-bromopropyl)-4'-chlorobenzophenone, and the like.

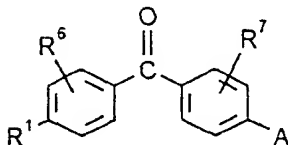
In the above process (g), the compounds of the formula (XII) are well known in the field of organic chemistry and, for example, there may be mentioned: methylmercaptan and salts thereof, ethylmercaptan and salts thereof, and the like.

In the above process (h), the compounds of the formula (XIII) are novel and such compounds can be synthesized by, for instance, reacting benzophenones of the above formula (XI) with thiourea. This reaction is well known per se in the field of organic chemistry and can be carried out by the method analogous to that described in "Jikken Kagaku Koza

(Experimental Chemistry Course)\* fourth edition, edited by Japanese Chemical Society, Vol. 25, page 336, 1992, published by Maruzen.

Examples of the compounds of the formula (XIII) are shown in following Table 6.

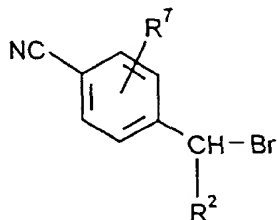
Table 6



| R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup>    | A   |
|----------------|----------------|-------------------|---|
| Br             | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | H                 | CH(C <sub>2</sub> H <sub>5</sub> )SC(=NH)NH <sub>2</sub> ·HBr   |
| Cl             | H              | H                 | CH(CH <sub>3</sub> )SC(=NH)NH <sub>2</sub> ·HBr                 |
| Cl             | H              | H                 | CH(n-C <sub>3</sub> H <sub>7</sub> )SC(=NH)NH <sub>2</sub> ·HBr |
| Cl             | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 2-CH <sub>3</sub> | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 3-CH <sub>3</sub> | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 2-F               | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 3-F               | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 2-Cl              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 3-Cl              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 2-Br              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | H              | 3-Br              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | 2-Cl           | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | 2-F            | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | 3-F            | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| Cl             | 3-Cl           | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| F              | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| F              | 3-F            | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |
| I              | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr                     |

In the process (h), the compounds of the formula (XIV) are known in the field of organic chemistry and, for example, there may be mentioned: methyl iodide, ethyl iodide, methyl bromide, ethyl bromide, bromodifluoromethane, iodotrifluoromethane, 1-bromo-2-fluoroethane, 1-bromo-2-chloroethane, 2,2,2-trifluoro-1-iodoethane, 1-bromo-2,2-difluoroethane, and the like.

In the process (j), the compounds of the formula (XV) can be obtained when compounds of the formula (XXVI)



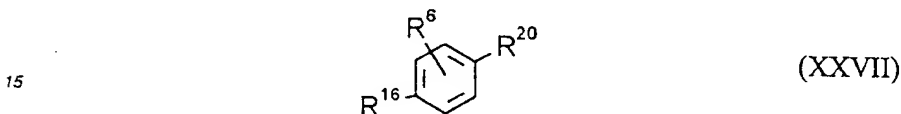
(XXVI)

wherein  $R^2$  and  $R^7$  are defined as above,  
are reacted with the compound of the formula (XII),  
in the presence of an acid binder, and, if appropriate, in the presence of an inert solvent, under the same reaction conditions as described for process (g).

5 The compounds of the formula (XXVI) are well known and include the following: 4-cyanobenzyl bromide, 4-cyanobenzyl chloride, and the like.

In the process (j), the compounds of the formula (XV) are well known and exemplified by the following compounds: 4-methylmercaptobenzonitril, and the like.

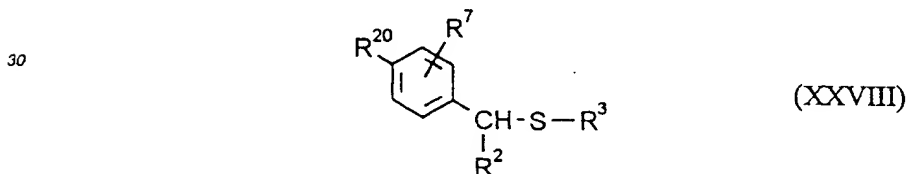
10 In the process (j), the compounds of the formula (XVI) are obtained by metalation of compounds of the formula (XXVII)



20 wherein  $R^6$  and  $R^{16}$  have same meaning as mentioned above, and  $R^{20}$  is bromine or iodine, with alkyllithium or magnesium, in the presence of an inert solvent, and, if appropriate, in the presence of a catalyst.

The following compounds of the formula (XXVII) may be mentioned: 4-fluorobromobenzene, 4-fluoroiodobenzene, 4-chloroiodobenzene, 4-chlorobromobenzene, 2-fluoro-4-chlorobromobenzene, 3-fluoro-4-chlorobromobenzene, and the like.

25 In the process (k), the compounds of the formula (XVII) are obtained by metalation of compounds of the formula (XXVIII)



35 wherein,  $R^2$ ,  $R^3$ ,  $R^7$  and  $R^{20}$  have same meaning mentioned above, with alkyllithium or magnesium, in the presence of an inert solvent, and, if appropriate, in the presence of a catalyst.

The compounds of the formula (XXVIII) are well known and include the following: 4-methylthiomethylbromobenzene, 4-methylthiomethyliodobenzene, 4-ethylthiomethylbromobenzene, 4-ethylthiomethyliodobenzene, and the like.

40 In the process (m), the compounds of the formula (XIX) are well known compounds in the field of organic chemistry, and include the following: 4-(4-chlorobenzoyl)benzylthiocyanate, and the like.

In the process (m), the compounds of the formula (XX) are well known compounds in the field of organic chemistry, and include the following: iodotrifluoromethane, iodopentafluoroethane, and the like.

45 The reaction in the process (m) can be conducted by a method analogous to that described in Journal of Fluorine Chemistry Vol.43, 27-24 (1989).

In the process (n), the compounds of the formula (XXI) are synthesized by the above processes (g) to (m) and include the following:

50 4-fluoro-4'-methylmercaptomethylbenzophenone,  
4-chloro-4'-methylmercaptomethylbenzophenone,  
4-bromo-4'-methylmercaptomethylbenzophenone,  
4-iodo-4'-methylmercaptomethylbenzophenone,  
4-fluoro-4'-ethylmercaptomethylbenzophenone,  
55 4-chloro-4'-ethylmercaptomethylbenzophenone,  
4-bromo-4'-ethylmercaptomethylbenzophenone, and the like.

In the process (n), the compounds of the formula (XXII) are known in the field of organic chemistry and include the following: methyl iodide, ethyl iodide, methyl bromide, ethyl bromide, and the like.

The process (n) is well known per se in the field of organic chemistry and can be carried out by, for example, the method similar to that described in "Jikken Kagaku Koza (Experimental Chemistry Course)" fourth edition, edited by Japanese Chemical Society, Vol. 25, page 329, 1992, published by Maruzen.

In the process (n), the compounds of the formula (XXIII) are synthesized by the above processes (g) to (n). As examples thereof, the following compounds in addition to those exemplified as the compounds of the above formula (XXI) may be mentioned:

4-bromo-4'-(1-methylmercaptoethyl)benzophenone,  
4-chloro-4'-(1-methylmercaptoethyl)benzophenone,  
4-chloro-4'-(1-methylmercaptoethyl)benzophenone,  
4-chloro-4'-(1-methylmercaptobutyl)benzophenone, and the like.

As the oxidizing agents used in the above process (p), there may be mentioned, for example, aqueous hydrogen peroxide, peracetic acid, m-chloroperbenzoic acid, OXONE™, sodium periodate, t-butylhydroperoxide and N-bromosuccinimide.

The oxidation reaction in the above production methods (p) and (q) can be carried out by, for example, the method similar to that described in "Jikken Kagaku Koza (Experimental Chemistry Course)" fourth edition, edited by Japanese Chemical Society, Vol. 24, page 350 or 365, 1992, published by Maruzen.

In the above process (q), the compounds of the formula (XXIV) are synthesized by the above production methods (g) to (p). As examples thereof, the following compounds in addition to those exemplified as the compounds of the above formulae (XXI) and (XXIII) may be mentioned:

4-fluoro-4'-methylsulfinylmethylbenzophenone,  
4-chloro-4'-methylsulfinylmethylbenzophenone,  
4-chloro-4'-difluoromethylsulfinylmethylbenzophenone,  
4-bromo-4'-methylsulfinylmethylbenzophenone,  
4-iodo-4'-methylsulfinylmethylbenzophenone,  
4-ethylsulfinylmethyl-4'-fluorobenzophenone,  
4-chloro-4'-ethylsulfinylmethylbenzophenone,  
4-bromo-4'-ethylsulfinylmethylbenzophenone,  
4-bromo-4'-(1-methylsulfinylethyl)benzophenone,  
4-chloro-4'-(1-methylsulfinylethyl)benzophenone,  
4-chloro-4'-(1-methylsulfinylpropyl)benzophenone,  
4-chloro-4'-(1-methylsulfinylbutyl)benzophenone, and the like.

As the oxidizing agents which can be used in the above production method (q), there may be mentioned, for example, potassium permanganate, sodium perborate in addition to the oxidizing agents described in connection with the above production method (p).

In the process (a), starting compounds of the formula (III) mean compounds based on the above definition of R<sup>4</sup>, preferably compounds based on the above preferred definition.

In the process (a), the compounds of the formula (III) are well known in the field of organic chemistry, and include the following:

hydrazine hydrate, methyl carbazate, ethyl carbazate, n-propyl carbazate, isopropyl carbazate, n-butyl carbazate, isobutyl carbazate, tert-butylhydrazine, acetohydrazide, benzohydrazide, semicarbazide, thiosemicarbazide, formic hydrazide, and the like.

In the processes (b) and (c), starting compounds of the formula (IV) mean compounds based on the above definition of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>7</sup> and n, preferably compounds based on the above preferred definitions.

The compounds of the formula (IV) are synthesized by the above processes (a), (d), (e) and (f). Specific examples of the compounds of the formula (IV) include the following compounds:

4-fluoro-4'-methylmercaptomethylbenzophenone hydrazone,  
4-chloro-4'-methylmercaptomethylbenzophenone hydrazone,  
4-chloro-4'-difluoromethylmercaptomethylbenzophenone hydrazone,  
4-chloro-4'-trifluoromethylmercaptomethylbenzophenone hydrazone,  
4-bromo-4'-methylmercaptomethylbenzophenone hydrazone,  
4-ethylmercaptomethyl-4'-fluorobenzophenone hydrazone,  
4-chloro-4'-methylsulfinylmethylbenzophenone hydrazone,  
4-ethylsulfinylmethyl-4'-bromobenzophenone hydrazone,  
4-bromo-4'-methylsulfonylmethylbenzophenone hydrazone,

4-chloro-4'-methylsulfonylmethylbenzophenone hydrazone, and the like.

In the process (b), the compounds of the formula (V), as the starting material, are well known in the field of organic chemistry. Examples thereof which may be mentioned are as follows:

5 4-trifluoromethoxyphenylisocyanate, phenylisocyanate, and the like.

In the process (c), the compounds of the formula (VI) as the starting material are well known in the field of organic chemistry. Examples thereof which may be mentioned are as follows:

methyl chlorocarbonate, ethyl chlorocarbonate, propyl chlorocarbonate, isopropyl chlorocarbonate, butyl chlorocarbonate, isobutyl chlorocarbonate, tert-butyl chlorocarbonate, methyl bromocarbonate, ethyl bromocarbonate, propyl  
10 bromocarbonate, isopropyl bromocarbonate, butyl bromocarbonate, isobutyl bromocarbonate, tert-butyl bromocarbonate, allyl bromocarbonate, acetyl chloride, acetyl bromide, propionyl chloride, butyryl chloride, isobutyryl chloride, valeryl chloride, isovaleryl chloride, pivaloyl chloride, and the like.

In the processes (d), the compounds of the formula (VII) are synthesized by the above processes (a), (b), (c) and (f). Examples thereof include the following compounds:

15 4-fluoro-4'-methylmercaptomethylbenzophenone hydrazone,  
4-bromo-4'-methylmercaptomethylbenzophenone hydrazone,  
4-iodo-4'-methylmercaptomethylbenzophenone hydrazone,  
4-chloro-4'-ethylmercaptomethylbenzophenone hydrazone,  
20 4-bromo-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone,  
4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone,  
4-chloro-4'-ethylmercaptomethylbenzophenone ethoxycarbonylhydrazone,  
4-chloro-4'-(1-methylmercaptoethyl)benzophenone ethoxycarbonylhydrazone, and the like.

25 In the process (d), the compounds of the formula (VIII) as the starting material are those which are well known in the field of organic chemistry. Examples thereof which may be mentioned are as follows:

methyl iodide, ethyl iodide, propyl iodide, chloromethyl methyl ether, chloromethyl ethyl ether, chloromethyl methyl sulfide, acetyl chloride, benzoyl chloride, cinnamoyl chloride, methylchloroformate, methyl chlorocarbonate, ethyl chlorocarbonate, propyl chlorocarbonate, isopropyl chlorocarbonate, butyl chlorocarbonate, isobutyl chlorocarbonate, tert-  
30 butyl chlorocarbonate, methyl bromocarbonate, ethyl bromocarbonate, propyl bromocarbonate, isopropyl bromocarbonate, butyl bromocarbonate, isobutyl bromocarbonate, tert-butyl bromocarbonate, allyl bromocarbonate, and the like.

In the process (e), the compounds of the formula (IX) are obtained by the processes (a) to (d). Examples thereof include the following compounds, in addition to those exemplified as the compounds of formulae (IV) and (VII).

35 As the oxidizing agents which are used in the above processes (e) and (f), there may be mentioned the oxidizing agents described in connection with the process (n).

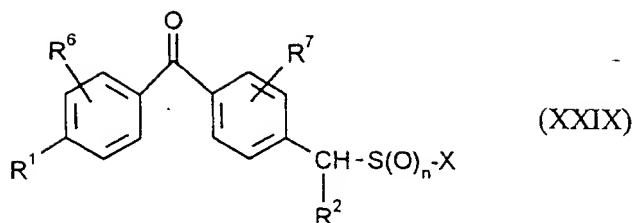
In the process (f), the compounds of the formula (X) are the compounds according to the invention, which are synthesized by the above processes (a) to (e). As example thereof, the following compounds in addition to those exemplified as the compounds of the above formulae (IV) and (VII) may be mentioned:

40 4-fluoro-4'-methylsulfinylmethylbenzophenone hydrazone,  
4-bromo-4'-methylsulfinylmethylbenzophenone hydrazone,  
4-iodo-4'-methylsulfinylmethylbenzophenone hydrazone,  
4-chloro-4'-ethylsulfinylmethylbenzophenone hydrazone,  
4-chloro-4'-methylsulfinylmethylbenzophenone ethoxycarbonylhydrazone, and  
45 4-bromo-4'-ethylsulfinylmethylbenzophenone ethoxycarbonylhydrazone.

As are mentioned hereinabove, the compounds of the formulae (II), (XIII), (XIX), (XXI), (XXIII), and (XXIV) which are employed as starting materials or intermediates in the preparation of the compounds of the formula (I) are novel, and then those compounds can be represented by the following formula (XXIX):

50

55



10  
wherein

- 15  $R^1$  is halogen,  
 $R^2$  is hydrogen or  $C_{1-4}$  alkyl,  
 $R^6$  is hydrogen or halogen,  
 $R^7$  is hydrogen, halogen or  $C_{1-2}$  alkyl,  
 $n$  is 0, 1 or 2,  
 $X$  is cyano, optionally substituted  $C_{1-4}$  alkyl,  $C_{2-4}$  alkenyl,  $C_{3-4}$  alkynyl,  $C_{1-4}$  alkylcarbonyl,  $C_{1-4}$  alkoxy-thiocarbonyl or carboxamidine and their salts, provided that when  $X$  is cyano,  $C_{1-4}$  alkylcarbonyl  $C_{1-4}$  alkoxy-thiocarbonyl or carboxamidine and their salts then  $n$  is 0.
- 20

The reaction of the above production method (a) can be carried out in an appropriate diluent. As such diluents, there may be mentioned optional inert organic solvents, for example, aliphatic, alicyclic or aromatic hydrocarbons (which may be optionally chlorinated), such as pentane, hexane, cyclohexane, petroleum ether, ligroin, benzene, toluene, xylene, dichloromethane, chloroform, carbon tetrachloride, 1,2-dichloroethane, chlorobenzene and dichlorobenzene; ethers such as ethyl ether, methyl ethyl ether, isopropyl ether, butyl ether, dioxane, dimethoxyethane (DME), tetrahydrofuran (THF) and diethylene glycol dimethyl ether (DGM); nitriles such as acetonitrile, propionitrile and acrylonitrile; alcohols, with the proviso that  $R^3$  is not monohalogenomethyl, such as methanol, ethanol, isopropanol, butanol and ethylene glycol; esters such as ethyl acetate and amyl acetate; acid amides such as dimethylformamide (DMF), dimethylacetamide (DMA), N-methylpyrrolidone, 1,3-dimethyl-2-imidazolidinone and hexamethylphosphoric triamide (HMPA); and sulfones and sulfoxides such as dimethyl sulfoxide (DMSO) and sulfolan.

25

The reaction in the above production method (a), can be carried out in the presence of an acid catalyst. Examples of usable acid catalysts may be mentioned: mineral acids such as hydrochloric acid, sulfuric acid, phosphoric acid, hydrobromic acid, organic acids such as formic acid, acetic acid, trifluoroacetic acid, and propionic acid, methanesulfonic acid, benzenesulfonyl acid and p-toluenesulfonic acid; and organic amine hydrochlorides such as pyridine hydrochloride and triethylamine hydrochloride and the like.

30

The reaction of the production method (a) can be conducted at a temperature within a substantially broad range, but it is generally possible to employ a reaction temperature of about  $-20$  to about  $200^\circ\text{C}$ , preferably about  $20$  to about  $150^\circ\text{C}$ . Further, the reaction should preferably be conducted under normal pressure but it may optionally be operated under an elevated or reduced pressure.

40

For carrying out the production method (a), for instance, 1 mole of the compound of the formula (II) can be reacted with 1 to 10 moles of the compound of the formula (III) in a diluent such as ethanol and in the presence of an acid catalyst such as acetic acid to thereby obtain the object compound of the formula (I).

45 In carrying out the process (b) mentioned above, use may be made, as suitable diluent, of any inert solvent.

Examples of such diluents are aliphatic, cycloaliphatic and aromatic, optionally chlorinated, hydrocarbons such as pentane, hexane, cyclohexane, petroleum ether, ligroin, benzene, toluene, xylene, dichloromethane, chloroform, carbon tetrachloride, 1,2-dichloroethane, chlorobenzene, dichlorobenzene and the like; ethers such as diethyl ether, methyl ethyl ether, diisopropyl ether, dibutyl ether, dioxane, dimethoxyethane (DME), tetrahydrofuran (THF), dimethylene glycol dimethyl ether and the like; ketones such as acetone, methylethyl ketone (MEK), methyl-isopropyl ketone, methyl-isobutyl ketone (MIBK) and the like; nitriles such as acetonitrile, propionitrile and the like; esters such as ethyl acetate, amyl acetate and the like, acid amides such as dimethyl formamide (DMF), dimethyl acetamide (DMA), N-methylpyrrolidone, 1,3-dimethyl-2-imidazolidinone, hexamethylphosphoric triamide (HMPA) and the like; sulfones and sulfoxides such as dimethyl sulfoxide (DMSO), sulfolane and the like; and base such as pyridine.

50

In the above mentioned process (b), the reaction temperature can be varied within a substantially wide range. In general, the reaction is carried out at a temperature of from about  $-120^\circ\text{C}$  to about  $200^\circ\text{C}$ , preferably from  $20^\circ\text{C}$  to about  $100^\circ\text{C}$ .

55

Further, the reaction is carried out under normal pressure, although it is also possible to employ a higher or reduced pressure.

When the above mentioned process (b) according to the present invention is carried out, use is made, for example, of about 1 to 3 moles of the compound of the formula (V) in a diluent such as acetonitrile per 1 mole of the compounds represented by the general formula (IV) to obtain the desired compounds.

The reaction of the above production method (c) can be carried out in an appropriate diluent, for example, an optional inert organic solvent. Examples of such organic solvents are: aliphatic, alicyclic or aromatic hydrocarbons (which may be optionally chlorinated), such as pentane, hexane, cyclohexane, petroleum ether, ligroin, benzene, toluene, xylene, dichloromethane, chloroform, carbon tetrachloride, 1,2-dichloroethane, chlorobenzene and dichlorobenzene; ethers such as ethyl ether, methyl ethyl ether, isopropyl ether, butyl ether, dioxane, dimethoxyethane (DME), tetrahydrofuran (THF) and diethylene glycol dimethyl ether (DGM); ketones such as acetone, methyl ethyl ketone (MEK), methyl-isopropyl ketone and methyl isobutyl ketone (MIBK); nitriles such as acetonitrile, propionitrile and acrylonitrile; esters such as ethyl acetate and amyl acetate; acid amides such as dimethylformamide (DMF), dimethylacetamide (DMA), N-methylpyrrolidone, 1,3-dimethyl-2-imidazolidinone and hexamethylphosphoric triamide (HMPA); and sulfones and sulfoxides such as dimethyl sulfoxide (DMSO) and sulfolan.

The production method (c) can also be carried out in the presence of an acid binding agent. Examples of usable acid binding agents are as follows: inorganic bases, for example, hydroxides, carbonates and bicarbonates of alkali metals or alkaline earth metals, such as sodium hydrogencarbonate, potassium hydrogencarbonate, sodium carbonate, potassium carbonate, lithium hydroxide, sodium hydroxide, potassium hydroxide and calcium hydroxide; organic bases, for example, tertiary amines, N,N-dialkylanilines and pyridines, such as triethylamine, 1,1,4,4-tetramethylethylenediamine (TMEDA), N,N-dimethylaniline, N,N-diethylaniline, pyridine, 4-dimethylaminopyridine (DMAP), 1,4-diazabicyclo[2,2,2]octane (DABCO) and 1,8-diazabicyclo[5,4,0]undec-6-ene (DBU).

The reaction of the production method (c) can be conducted at a temperature within a substantially broad range, but it is generally possible to employ a reaction temperature of about -70 to about 150°C, preferably about -10 to about 80°C. Further, the reaction should preferably be conducted under normal pressure but it may optionally be operated under an elevated or reduced pressure.

For carrying out the production method (c), for instance, 1 mole of the compound of the formula (IV) can be reacted with 1 to 3 moles of the compound of the formula (VI) in a diluent such as dichloromethane and in the presence of a base such as 4-(N,N-dimethylamino)pyridine to thereby obtain the object compound of the formula (I).

In carrying out the process (d) mentioned above, use may be made, as suitable diluent, of any inert solvent. Examples of such diluents are aliphatic, cycloaliphatic and aromatic, optionally chlorinated, hydrocarbons such as pentane, hexane, cyclohexane, petroleum ether, ligroin, benzene, toluene, xylene, dichloromethane, chloroform, carbon tetrachloride, 1,2-dichloroethane, chlorobenzene, dichlorobenzene and the like; ethers such as diethyl ether, methyl ethyl ether, diisopropyl ether, dibutyl ether, dioxane, dimethoxyethane (DME), tetrahydrofuran (THF) dimethylene glycol dimethyl ether and the like; ketones such as acetone, methylethyl ketone (MEK), methyl-isopropyl ketone, methyl-isobutyl ketone (MIBK) and the like; nitriles such as acetonitrile, propionitrile and the like; esters such as ethyl acetate, amyl acetate and the like, acid amides such as dimethyl formamide (DMF), dimethyl acetamide (DMA), N-methylpyrrolidone, 1,3-dimethyl-2-imidazolidinone, hexamethylphosphoric triamide (HMPA) and the like; sulfones and sulfoxides such as dimethyl sulfoxide (DMSO), sulfolane and the like; and base such as pyridine.

The process (d) according to the invention is carried out preferably in the presence of an acid binder. As example of such acid binder may be mentioned: inorganic bases including hydroxide, carbonate, bicarbonate of alkali metals and alkali earth metals such as, for example, sodium hydrogencarbonate, potassium hydrogencarbonate, sodium carbonate, potassium carbonate, and the like, inorganic alkali metal amide including lithium amide, sodium amide, potassium amide, and the like, organic bases including alkoxide, tertiary amines, N,N-dialkylanilines, and pyridines such as, for example, triethylamine, tributylamine, 1,1,4,4-tetramethylethylenediamine (TMEDA), N,N-dimethylaniline, N,N-diethylaniline, pyridine, 4-dimethylaminopyridine (DMAP), 1,4-diazabicyclo-[2,2,2]octane (DABCO), 1,8-diazabicyclo[5,4,0]-undec-7-ene (DBU) and the like.

In the above mentioned process (d), the reaction temperature can be varied within a substantially wide range. In general, the reaction is carried out at a temperature of from about -70°C about 150°C, preferably from -10°C to about 100°C. Further, the reaction is carried out under normal pressure, although it is also possible to employ a higher or reduced pressure.

When the above mentioned process (d) according to the present invention is carried out, use is made, for example, about 1 to 5 moles of the compound of the formula (VIII), in diluent such as tetrahydrofuran and in the presence of an acid binder, such as sodium hydrogencarbonate, per 1 mole of the compounds represented by the general formula (VII) to obtain the desired compounds.

The reaction of the above production methods (e) and (f) can be carried out in an appropriate diluent. As such diluents, there may be mentioned water and optional inert organic solvents, for example, aliphatic, alicyclic or aromatic hydrocarbons (which may be optionally chlorinated) such as pentane, hexane, cyclohexane, petroleum ether, ligroin, benzene, toluene, xylene, dichloromethane, chloroform, carbon tetrachloride, 1,2-dichloroethane, chlorobenzene and dichlorobenzene; ethers such as ethyl ether, methyl ethyl ether, isopropyl ether, butyl ether, dioxane, dimethoxyethane

(DME), tetrahydrofuran (THF) and diethylene glycol dimethyl ether (DGM); nitriles such as acetonitrile, propionitrile and acrylonitrile; and alcohols such as methanol, ethanol, isopropanol, butanol and ethylene glycol.

The reaction of the production method (e) can be conducted at a temperature within a substantially broad range, but it is generally possible to employ a reaction temperature of about -30°C to about 150°C, preferably about -20°C to about 100°C. Furthermore, the reaction should preferably be conducted under normal pressure but it may optionally be operated under an elevated or reduced pressure.

For carrying out the production method (e), for instance, 1 mole of the compound of the formula (IX) can be reacted with 1 to 10 moles of an oxidizing agent in a diluent such as methanol to thereby obtain the object compound of the formula (I).

The production method (f) can be conducted at a temperature within a substantially broad range, but it is generally possible to employ a reaction temperature of about -70°C to about 150°C, preferably about -10°C to about 100°C. Further, the reaction should preferably be conducted under normal pressure but it may optionally be operated under an elevated or reduced pressure.

For carrying out the production method (f), for instance, 1 mole of the compound of the formula (X) can be reacted with 1 to 3 moles of an oxidizing agent in a diluent such as dichloromethane to thereby obtain the object compound of the formula (I).

Further, the compounds of the formula (I), according to the invention can be used for combating a broad range of various pests, particularly injurious sucking insects, biting insects and other plantparasitic pests as well as pests of stored cereals and hygiene pests, and can be used as insecticides for combating them.

Examples of such pests are as follows:

As insects, there may be mentioned pests from the order of the Coleoptera, for example, *Callosobruchus chinensis*, *Sitophilus zeamais*, *Tribolium castaneum*, *Epilachna vigintioctomaculata*, *Agriotes fuscicollis*, *Anomala rufo cuprea*, *Leptinotarsa decemlineata*, *Diabrotica* spp., *Monochamus alternatus*, *Lissorhoptrus oryzophilus* and *Lyctus brunneus*; pests from the order of the Lepidoptera, for example, *Lymantria dispar*, *Malacosoma neustria*, *Pieris rapae*, *Spodoptera litura*, *Mamestra brassicae*, *Chilo suppressalis*, *Pyrausta nubilalis*, *Ephesia cautella*, *Adoxophyes orana*, *Carpocapsa pomonella*, *Agrotis fucosa*, *Galleria mellonella*, *Plutella xylostella*, *Heliothis virescens* and *Phyllocnistis citrella*; pests from the order of the Hemiptera, for example, *Nephotettix cincticeps*, *Nilaparvata lugens*, *Pseudococcus comstocki*, *Unaspis yanonensis*, *Myzus persicae*, *Aphis pomi*, *Aphis gossypii*, *Lipaphis erysimi*, *Stephanitis nashi*, *Nezara* spp., *Cimex lectularius*, *Trialeurodes vaporariorum* and *Psylla* spp.;

pests from the order of the Orthoptera, for example, *Blattella germanica*, *Periplaneta americana*, *Grylotalpa africana* and *Locusta migratoria migratorioides*;

pests from the order of the Isoptera, for example, *Deucotermes speratus* and *Coptotermes formosanus*; and

pests from the order of the Diptera, for example, *Musca domestica*, *Aedes aegypti*, *Hylemia platura*, *Culex pipiens*, *Anopheles sinensis* and *Culex tritaeniorhynchus*.

As mites, there may be mentioned, for example, *Tetranychus kanzawai*, *Tetranychus urticae*, *panonychus citri*, *Aculops pelekassi* and *Tarsonemus* spp.

As nematodes, there may be mentioned, for example, *Meloidogyne incognita*, *Bursaphelenchus xylophilus*, *Aphelenchoides besseyi*, *Heterodera glycines* and *Pratylenchus* spp.

Further, in the pharmaceutical field of veterinary medicine, the novel compounds according to the invention are effective against various injurious animal parasites (endoparasites and ectoparasites), such as insects and helminths. Examples of such animal parasites include the following pests:

As insects, there may be mentioned, for example, *Gastrophilus* spp., *Stomoxys* spp., *Trichodectes* spp., *Rhodnius* spp. and *Ctenocephalides* spp.

As mites, there may be mentioned, for example, *Ornithodoros* spp., *Ixodes* spp. and *Boophilus* spp.

In this specification, the "insecticide(s)" is a generic term for substances having combating action against all the pests as mentioned above.

In the case of the use as insecticides, the active compounds of the formula (I) can be converted into customary formulations, such as solutions, wettable powders, suspensions, powders, foams, pastes, tablets, granules, aerosols, natural and synthetic materials impregnated with active compounds, very fine capsules in polymeric substances and in coating compositions for seed, furthermore in formulations used with burying equipment, such as fumigating cartridges, fumigating cans and fumigating coils and the like, as well as ULV cold- and warm-mist formulations.

These formulations are produced in the manner known per se, for example, by mixing the active compounds with extenders, that is liquid solvents, liquefied gases under pressure and/or solid carriers, optionally with the use of surface-active agents, that is emulsifying agents and/or dispersing agents and/or foam-forming agents. Use of a surface-active agent is preferred.

As liquid solvents or carriers, there are suitable in the main: aromatic hydrocarbons, such as xylene, toluene or alkyl naphthalenes; chlorinated aromatic hydrocarbons and chlorinated aliphatic hydrocarbons, such as chlorobenzenes, chloroethylenes or methylene chloride; aliphatic hydrocarbons, such as cyclohexane or paraffins, for example mineral oil fractions, alcohols, such as butanol or glycol as well as their ethers and esters, ketones, such as acetone, methyl

ethyl ketone, methyl isobutyl ketone or cyclohexanone; strongly polar solvents, such as dimethyl-formamide and dimethylsulfoxide; as well as water. In the case of the use of water as a liquid solvent or carrier, organic solvents can be used as auxiliary solvents.

By liquefied gaseous diluents or carriers there are meant liquids which are gaseous at normal temperature and under atmospheric pressure, for example aerosol propellants, such as butane, propane, nitrogen, carbon dioxide and halogeno-hydrocarbons.

As solid diluents or carriers there are suitable: for example, ground natural minerals, such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as highly-dispersed silicic acid, alumina and silicates.

As solid carriers for granules there are suitable: for example, crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks.

As emulsifying and/or foam-forming agents there are suitable: for example non-ionic and anionic emulsifiers, such as polyoxy-ethylene-fatty acid esters, polyoxyethylene-fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkyl-sulfonates, alkyl-sulfates, arylsulfonates as well as albumin hydrolysis products.

As dispersing agents there are suitable: for example lignin-sulphite waste liquors and methylcellulose.

Adhesives may also be used in formulations such as powders, granules and emulsions, and the followings are to be mentioned as examples of usable adhesives: for example carboxymethylcellulose and natural and synthetic polymers such as gum arabic, polyvinyl alcohol and polyvinyl acetate.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin dyestuffs, azo dyestuffs and metal phthalocyanine dyestuffs, and trace nutrients such as salts of metals, for example iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations in general can contain between 0.1 and 95 per cent by weight, preferably between 0.5 and 90% by weight of the above active compound.

The active compounds of the formula (I), according to the invention, can be present in their commercially available formulations and the use forms prepared with these formulations as a mixture with other active compounds, such as insecticides, attractants, sterilants, miticides, nematocides, fungicides, growth-regulating substances or herbicides. The above insecticides include, for example, organic phosphate, carbamates, carboxylates, chlorinated hydrocarbons and insecticidal substances produced by microorganisms.

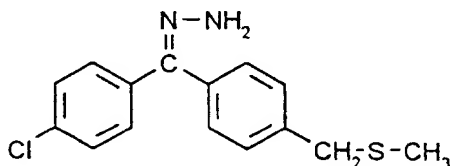
The active compounds of the formula (I), according to the invention, can further be present as a mixture with synergistic agents. Synergistic agents are compounds which increase the action of the active compounds, without it being necessary for the synergistic agent added to be active itself.

The content of the active compounds of the formula (I), according to the invention, in their use form can be varied within wide limits. The concentration of the active compounds of the formula (I) according to the invention in their use form can generally be from 0.000001 to 100 per cent by weight, preferably between 0.00001 and 1 per cent by weight.

The compounds of the formula (I), according to the invention, can be employed in a customary manner appropriate for the use forms, for example, by spraying and by scattering. The compounds of formula (I) can be applied for the treatment of soil and of leaves. They also show activity after systemic translocation. Further, the active compounds according to the invention have a good stability to alkali on limed substances and excellent residual action on wood and soil. Thus, they are extremely effective for combating hygiene pests and pests of stored cereals.

Then, the following Examples illustrate the invention, but they should not be regarded as limiting the scope of the invention.

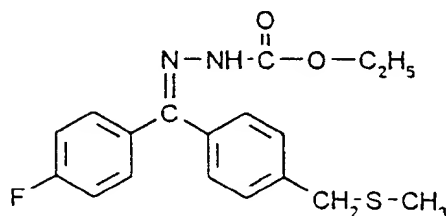
### Synthesis Example 1



An ethanol solution (50 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (9.3 g), hydrazine hydrate (6 ml) and acetic acid (3 ml) was heated for 20 hours with refluxing. The solvent was distilled off under reduced pressure, and then the obtained oily substance was diluted with dichloromethane and washed successively with an aqueous 5% sodium hydroxide solution, water and an aqueous saturated sodium chloride solution, followed by drying over anhydrous mag-

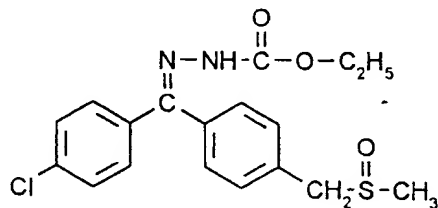
nesium sulfate. The solvent was then distilled off to obtain 4-chloro-4'-methylmercaptomethylbenzophenone hydrazone (7.1 g) as an isomer mixture (syn form/anti form = about 1:1).  
 $n_D^{20}$  1.6350

## 5 Synthesis Example 2



An ethanol solution (100 ml) of 4-fluoro-4'-methylmercaptomethylbenzophenone (7.8 g), ethyl carbazate (9.4 g) and acetic acid (9 ml) was heated for 20 hours with refluxing. The solvent was distilled off under reduced pressure, and then the obtained oily substance was diluted with dichloromethane, and washed successively with an aqueous 5% sodium hydroxide solution, water and an aqueous saturated sodium chloride solution, followed by drying over anhydrous magnesium sulfate. The solvent was then distilled off to obtain 4-fluoro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone (6.4 g) as an isomer mixture.  
 $n_D^{20}$  1.6040

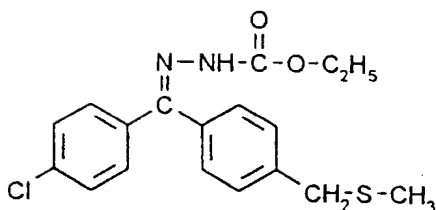
## Synthesis Example 3



An ethanol solution (100 ml) of 4-chloro-4'-methylsulfinylmethyl benzophenone (5.8 g), ethyl carbazate (6.3 g) and pyridinium p-toluenesulfonate (0.1 g) was heated for 6 hours with refluxing. After cooling to a room temperature, the reaction mixture was poured into ice-water, and the precipitated crystals were collected by filtration, and washed successively with an aqueous sodium bicarbonate solution and water. After air-drying, 4-chloro-4'-methylsulfinylmethylbenzophenone ethoxycarbonylhydrazone (6.4 g) was obtained as an isomer mixture.  
 melting point: 65 - 70°C

A reaction was conducted in the same manner as in Synthesis Example 3 except that 4-chloro-4'-methylsulfonylmethylbenzophenone (6.2 g) was used instead of 4-chloro-4'-methylsulfinylmethylbenzophenone to thereby obtain 4-chloro-4'-methylsulfonylmethylbenzophenone ethoxycarbonylhydrazone (6.7 g) as an isomer mixture.  
 melting point: 166 - 169°C

## Synthesis Example 4

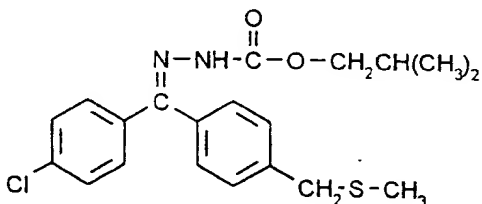


15 An ethanol solution (100 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (8.3 g), ethyl carbazate (10 g) and pyridinium p-toluenesulfonate (0.1 g) was heated for 16 hours with refluxing. After cooling to a room temperature, the reaction mixture was poured into ice water, and then the precipitated crystals were collected by filtration, and washed with water. After air-drying, 4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone (9.4 g) was obtained as an isomer mixture.

20 melting point: 105 - 109°C

This mixture (1.0 g) was purified by silica gel column chromatography (developing solvent: n-hexane:ethyl acetate = 9:1) to obtain 0.24 g of Isomer A having a melting point of 106 - 107°C from the first eluate portion and 0.56 g of Isomer B having a melting point of 117 - 120°C from the second eluate portion.

## 25 Synthesis Example 5



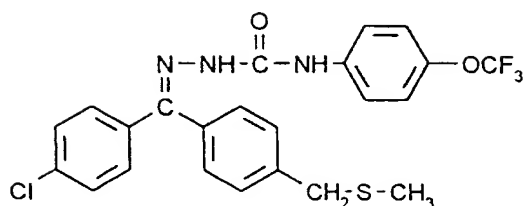
40 To a dichloromethane solution (30 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone hydrazone (1.5 g) and 4-(N,N-dimethylamino)pyridine (1.2 g), isobutyl chlorocarbonate (0.8 g) was dropwise added under cooling with ice and subsequently stirred at a room temperature for 20 hours. The reaction mixture was then successively washed with 2N hydrochloric acid, water and an aqueous saturated sodium chloride solution, and dried over anhydrous magnesium sulfate. After distilling off the solvent, the crude product was purified by silica gel column chromatography (developing solvent: ethyl acetate:n-hexane = 1:4) to obtain 4-chloro-4'-methylmercaptomethylbenzophenone isobutoxycarbonyl hydrazone (0.5 g) as an isomer mixture.

45  $n_D^{20}$  1.6103

50

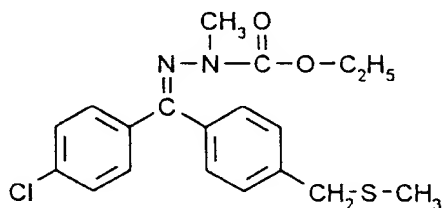
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## Synthesis Example 6



To a acetonitrile solution (10 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (0.5 g), 4-trifluoromethoxyphenyl isocyanate (0.3 g) was added and stirred at a room temperature for 10 hours. After the solvent was distilled off under reduced pressure, the residue was recrystallized from ethanol to obtain 4-chloro-4'-methylmercaptomethylbenzophenone 4-(4-trifluoromethoxyphenyl)-semi-carbazone (0.5 g).  
melting point: 179 - 183 °C

## Synthesis Example 7



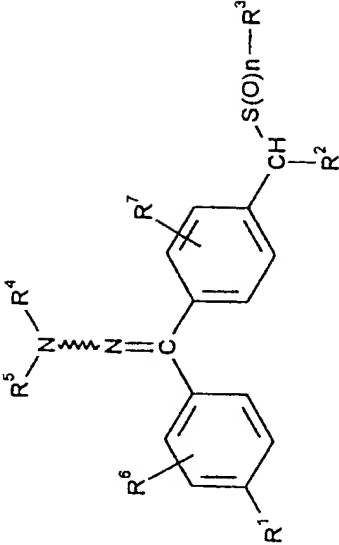
To a dimethylformamide solution (10 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone ethoxycarbonylhydrazone (3.6 g), sodiumhydride-60% oil suspension (0.4 g) was added under an argon atmosphere and stirred at a room temperature until the evolution of hydrogen gas ceased.

And then methyl iodide (3 g) was added and stirred at room temperature for 16 hours. After the reaction mixture was poured into ice-water, ethyl acetate was added thereto. Then the organic layer was separated, and washed successively with an aqueous 2 N hydrochloric acid solution, water and aqueous saturated sodium chloride solution, followed by drying over anhydrous sodium sulfate. After distilling off the solvent, the obtained crude product was purified by silica gel column chromatography (developing solvent n-hexane:ethyl acetate = 5:1) to obtain 4-chloro-4'-methylmercaptomethylbenzophenone N'-ethoxycarbonyl-N'-methylhydrazone (1.5 g).

$n_D^{20}$  1.6039

The following Table 7 shows the compounds synthesized in the above Synthesis Examples 1 to 7 together with the compounds synthesized in the same manner as those in the Synthesis Examples 1 to 7. Compounds of Nos. 1 to 30, and 33 to 216 are isomer mixtures (anti form/syn form). Compound Nos. 31 and 32 are pure isomers.

Table 7



| Compound No. | R <sup>1</sup> |                | R <sup>3</sup>  | n | R <sup>4</sup>                                |  | R <sup>5</sup>                   | R <sup>6</sup> | R <sup>7</sup> | melting point or refractive index     |
|--------------|----------------|----------------|-----------------|---|---|--|----------------------------------|----------------|----------------|---------------------------------------|
|              | R <sup>1</sup> | R <sup>2</sup> |                 |   | R <sup>4</sup>                                |  |                                  |                |                |                                       |
| 1            | Br             | H              | CH <sub>3</sub> | 0 | H   |  | H                                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6890 |
| 2            | Cl             | H              | CH <sub>3</sub> | 0 | H   |  | H                                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6350 |
| 3            | Cl             | H              | CH <sub>3</sub> | 1 | H   |  | H                                | H              | H              | 45 - 51 °C                            |
| 4            | Cl             | H              | CH <sub>3</sub> | 2 | H   |  | H                                | H              | H              | 124 - 130 °C                          |
| 5            | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |  | CH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5972 |
| 6            | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |  | CH <sub>2</sub> SCH <sub>3</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6032 |
| 7            | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |  | CH <sub>3</sub>                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6186 |
| 8            | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |  | H                                | H              | H              | 98 - 103 °C                           |
| 9            | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>3</sub>               |  | CH <sub>2</sub> OCH <sub>3</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5984 |
| 10           | Br             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>3</sub>               |  | H                                | H              | H              | 125 - 135 °C                          |

Table 7 (continued)

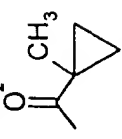
| Compound<br>No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                   | n | R <sup>4</sup>                                | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|-----------------|----------------|----------------|----------------------------------|---|---|---|----------------|----------------|---------------------------------------|
|                 |                |                |                                  |   |   |   |                |                |                                       |
| 11              | Br             | H              | C <sub>2</sub> H <sub>5</sub>    | 0 | CO <sub>2</sub> CH <sub>3</sub>               | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6267 |
| 12              | Br             | H              | CH <sub>2</sub> CF <sub>3</sub>  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5824 |
| 13              | Br             | H              | CH <sub>2</sub> CHF <sub>2</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5941 |
| 14              | Br             | H              | CH <sub>3</sub>                  | 1 | CO <sub>2</sub> CH <sub>3</sub>               | H   | H              | H              | 58 - 63 °C                            |
| 15              | Br             | H              | CH <sub>3</sub>                  | 2 | CO <sub>2</sub> CH <sub>3</sub>               | H   | H              | H              | 179 - 183 °C                          |
| 16              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                       | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5763 |
| 17              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>                                      | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5773 |
| 18              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5903 |
| 19              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> SCH <sub>3</sub>  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6088 |
| 20              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>3</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6039 |
| 21              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CHF <sub>2</sub>  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5824 |
| 22              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> |  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5872 |
| 23              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | COC <sub>3</sub> H <sub>7</sub> -iso  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5740 |
| 24              | Cl             | H              | CH <sub>3</sub>                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | COC <sub>3</sub> H <sub>7</sub> -n  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5830 |

Table 7 (continued)

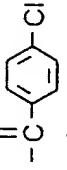
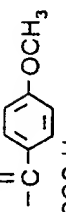
| Compound No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>     | n | R <sup>4</sup>                                     | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | melting point or refractive index     |
|--------------|----------------|----------------|--------------------|---|--|---|----------------|----------------|---------------------------------------|
| 25           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      |  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5996 |
| 26           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      |  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6036 |
| 27           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COC <sub>6</sub> H <sub>5</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6175 |
| 28           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COCH=CHC <sub>6</sub> H <sub>5</sub>  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6318 |
| 29           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COCH <sub>3</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6015 |
| 30           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H   | H              | H              | 105 - 109 °C                          |
| 31           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H   | H              | H              | 106 - 107 °C                          |
| 32           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H   | H              | H              | 117 - 120 °C                          |
| 33           | Cl             | H              | CH <sub>2</sub> CN | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H   | H              | H              | 105 - 106.5 °C                        |
| 34           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | n-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5872 |
| 35           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>    | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5954 |
| 36           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>2</sub> CH=CH <sub>2</sub> | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6229 |
| 37           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl | H   | H              | H              | 98 - 101 °C                           |
| 38           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | CH <sub>2</sub> OCH <sub>3</sub>  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6029 |
| 39           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | H   | H              | H              | 136 - 140 °C                          |
| 40           | Cl             | H              | CH <sub>2</sub> CN | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | H   | H              | H              | 38.5 - 147.5 °C                       |
| 41           | Cl             | H              | CH <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -iso | H   | H              | H              | 115 - 119 °C                          |

Table 7 (continued)

| Compound No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                     | n | R <sup>4</sup>                                      | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup>    | melting point or refractive index     |
|--------------|----------------|----------------|------------------------------------|---|---|----------------|----------------|-------------------|---------------------------------------|
|              |                |                |                                    |   |   |                |                |                   |                                       |
| 42           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -iso  | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.6103 |
| 43           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n    | H              | H              | H                 | 94 - 98 °C                            |
| 44           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -n    | H              | H              | H                 | 79 - 83 °C                            |
| 45           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>5</sub> H <sub>11</sub> -n   | H              | H              | H                 | 86 - 89 °C                            |
| 46           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>6</sub> H <sub>13</sub> -n   | H              | H              | H                 | 63.5 - 66.5 °C                        |
| 47           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -tert | H              | H              | H                 | 52 - 55 °C                            |
| 48           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | 3-Br              | 124 - 125 °C                          |
| 49           | Cl             | H              | CH <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | 3-CH <sub>3</sub> | n <sub>D</sub> <sup>20</sup> = 1.6147 |
| 50           | Cl             | H              | C <sub>2</sub> H <sub>5</sub>      | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | 77 - 78.5 °C                          |
| 51           | Cl             | H              | C <sub>2</sub> H <sub>5</sub>      | 0 | CO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>     | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.5732 |
| 52           | Cl             | H              | C <sub>2</sub> H <sub>5</sub>      | 0 | CO <sub>2</sub> CH <sub>3</sub>                     | H              | H              | H                 | 87 - 92 °C                            |
| 53           | Cl             | H              | C <sub>3</sub> H <sub>7</sub> -iso | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | 125 - 127 °C                          |
| 54           | Cl             | H              | C <sub>3</sub> H <sub>7</sub> -iso | 0 | CO <sub>2</sub> CH <sub>3</sub>                     | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.6267 |
| 55           | Cl             | H              | C <sub>3</sub> H <sub>7</sub> -n   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | 70 - 71 °C                            |
| 56           | Cl             | H              | C <sub>3</sub> H <sub>7</sub> -n   | 0 | CO <sub>2</sub> CH <sub>3</sub>                     | H              | H              | H                 | 98 - 101 °C                           |
| 57           | Cl             | H              | C <sub>4</sub> H <sub>9</sub> -n   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.5908 |
| 58           | Cl             | H              | CF <sub>3</sub>                    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.5772 |
| 59           | Cl             | H              | CH <sub>2</sub> C≡CH               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | 118 - 124 °C                          |
| 60           | Cl             | H              | CH <sub>2</sub> C≡CH               | 0 | CO <sub>2</sub> CH <sub>3</sub>                     | H              | H              | H                 | 127 - 137 °C                          |
| 61           | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>       | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.5838 |
| 62           | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>    | 0 | CO <sub>2</sub> CH <sub>3</sub>                     | H              | H              | H                 | n <sub>D</sub> <sup>20</sup> = 1.5603 |

Table 7 (continued)

| Compound<br>No. | R <sup>1</sup> | R <sup>2</sup>  | R <sup>3</sup>                                     | n | R <sup>4</sup>                                     | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|-----------------|----------------|-----------------|--|---|--|----------------|----------------|----------------|---------------------------------------|
|                 |                |                 |  |   |  |                |                |                |                                       |
| 63              | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 77 - 79 °C                            |
| 64              | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> F                  | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 75.5 - 77.5 °C                        |
| 65              | Cl             | H               | CH <sub>2</sub> CH <sub>2</sub> F                  | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 78 - 82 °C                            |
| 66              | Cl             | H               | CH <sub>2</sub> CH=CH <sub>2</sub>                 | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 67 - 81 °C                            |
| 67              | Cl             | H               | CH <sub>2</sub> CHF <sub>2</sub>                   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5762 |
| 68              | Cl             | H               | CH <sub>2</sub> CHF <sub>2</sub>                   | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5838 |
| 69              | Cl             | H               | CHF <sub>2</sub>                                   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 85 - 88.5 °C                          |
| 70              | Cl             | H               | CHF <sub>2</sub>                                   | 0 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 85 - 88 °C                            |
| 71              | Cl             | H               | CH <sub>3</sub>                                    | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 65 - 70 °C                            |
| 72              | Cl             | H               | CH <sub>3</sub>                                    | 1 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 60 - 75 °C                            |
| 73              | Cl             | H               | C <sub>2</sub> H <sub>5</sub>                      | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5835 |
| 74              | Cl             | H               | C <sub>3</sub> H <sub>7-n</sub>                    | 1 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 69.5 - 72 °C                          |
| 75              | Cl             | H               | CH <sub>2</sub> CF <sub>3</sub>                    | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 64.5 - 72 °C                          |
| 76              | Cl             | H               | CHF <sub>2</sub>                                   | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 57 - 69 °C                            |
| 77              | Cl             | H               | CHF <sub>2</sub>                                   | 1 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | amorphous                             |
| 78              | Cl             | H               | CH <sub>3</sub>                                    | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 166 - 169 °C                          |
| 79              | Cl             | H               | CH <sub>3</sub>                                    | 2 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 205 - 208 °C                          |
| 80              | Cl             | H               | CH <sub>3</sub>                                    | 2 | CO <sub>2</sub> C <sub>4</sub> H <sub>9-tert</sub> | H              | H              | H              | 190 - 193 °C                          |
| 81              | Cl             | H               | C <sub>2</sub> H <sub>5</sub>                      | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 93 - 95 °C                            |
| 82              | Cl             | H               | C <sub>2</sub> H <sub>5</sub>                      | 2 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 70 - 78 °C                            |
| 83              | Cl             | H               | C <sub>3</sub> H <sub>7-iso</sub>                  | 2 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5930 |
| 84              | Cl             | H               | C <sub>3</sub> H <sub>7-n</sub>                    | 2 | CO <sub>2</sub> CH <sub>3</sub>                    | H              | H              | H              | 131 - 138 °C                          |
| 85              | Cl             | H               | CH <sub>2</sub> CHF <sub>2</sub>                   | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | 147 - 149 °C                          |
| 86              | Cl             | CH <sub>3</sub> | CH <sub>3</sub>                                    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6205 |

Table 7 (continued)

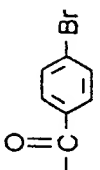
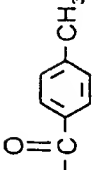
| Compound | No.            |                                 |                 |   |  |                |                | melting point or<br>refractive index |
|----------|----------------|---------------------------------|-----------------|---|--|----------------|----------------|--------------------------------------|
|          | R <sup>1</sup> | R <sup>2</sup>                  | R <sup>3</sup>  | n | R <sup>4</sup>   | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup>                       |
| 87       | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>3</sub>  | H              | H              | H                                    |
| 88       | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 89       | Cl             | CH <sub>3</sub>                 | CH <sub>3</sub> | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 90       | Cl             | C <sub>2</sub> H <sub>5</sub>   | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 91       | Cl             | n-C <sub>3</sub> H <sub>7</sub> | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 92       | Cl             | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | 2-Cl           | H                                    |
| 93       | Cl             | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>3</sub>  | H              | 2-Cl           | H                                    |
| 94       | Cl             | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | 3-Cl           | H                                    |
| 95       | F              | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 96       | F              | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | 3-F            | H                                    |
| 97       | I              | H                               | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 98       | Cl             | H                               | CH <sub>3</sub> | 0 | COCH <sub>3</sub>  | H              | H              | H                                    |
| 99       | Cl             | H                               | CH <sub>3</sub> | 0 | COC <sub>2</sub> H <sub>5</sub>  | H              | H              | H                                    |
| 100      | Cl             | H                               | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7-n</sub>  | H              | H              | H                                    |
| 101      | Cl             | H                               | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9-n</sub>  | H              | H              | H                                    |
| 102      | Cl             | H                               | CH <sub>3</sub> | 0 | COC <sub>4</sub> H <sub>9-tert</sub>   | H              | H              | H                                    |
| 103      | Cl             | H                               | CH <sub>3</sub> | 0 |  | H              | H              | H                                    |
| 104      | Cl             | H                               | CH <sub>3</sub> | 0 |  | H              | H              | H                                    |

Table 7 (continued)

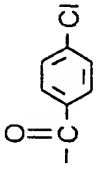
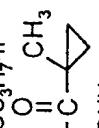

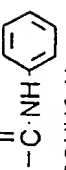
| Compound No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>4</sup>   | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | melting point or refractive index     |
|--------------|----------------|----------------|-----------------------------------|---|--|----------------|----------------|----------------|---------------------------------------|
| 105          | Cl             | H              | CH <sub>3</sub>                   | 0 |    | H              | H              | H              | 144 - 145 °C                          |
| 106          | Cl             | H              | CH <sub>3</sub>                   | 0 | COC <sub>6</sub> H <sub>5</sub>  | H              | H              | H              | 126 - 130 °C                          |
| 107          | Cl             | H              | CH <sub>3</sub>                   | 0 | COCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl                 | H              | H              | H              | 100 - 103 °C                          |
| 108          | Cl             | H              | CH <sub>3</sub>                   | 0 | COCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl                                 | H              | H              | H              | 83 - 88 °C                            |
| 109          | Cl             | H              | CH <sub>3</sub>                   | 0 | COCH <sub>2</sub> CH <sub>2</sub> Cl   | H              | H              | H              | 98 - 101 °C                           |
| 110          | Cl             | H              | CH <sub>3</sub>                   | 1 | COC <sub>3</sub> H <sub>7-n</sub>  | H              | H              | H              | 140 - 145 °C                          |
| 111          | Cl             | H              | CH <sub>3</sub>                   | 2 | COC <sub>3</sub> H <sub>7-n</sub>  | H              | H              | H              | 121 - 131 °C                          |
| 112          | Cl             | H              | CH <sub>3</sub>                   | 0 |    | H              | H              | H              | 145 - 148 °C                          |
| 113          | Cl             | H              | CH <sub>3</sub>                   | 0 | CONH <sub>2</sub>  | H              | H              | H              | 167 - 176 °C                          |
| 114          | Cl             | H              | CH <sub>3</sub>                   | 0 | CONHC <sub>2</sub> H <sub>5</sub>  | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6080 |
| 115          | Cl             | H              | CH <sub>3</sub>                   | 0 |   | H              | H              | H              | 179 - 183 °C                          |
| 116          | Cl             | H              | CH <sub>3</sub>                   | 0 | CONHCH <sub>2</sub> CH <sub>2</sub> Cl   | H              | H              | H              | 126 - 135 °C                          |
| 117          | Cl             | H              | CH <sub>3</sub>                   | 0 | CSNH <sub>2</sub>  | H              | H              | H              | 169 - 172 °C                          |
| 118          | Cl             | H              | CH <sub>3</sub>                   | 0 |  | H              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6824 |
| 119          | Cl             | H              | CH <sub>3</sub>                   | 2 | CONHC <sub>2</sub> H <sub>5</sub>  | H              | H              | H              | 186 - 189 °C                          |
| 120          | Cl             | H              | sec-C <sub>4</sub> H <sub>9</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H              | H              | H              | mixture of crystal and oily substance |

Table 7 (continued)

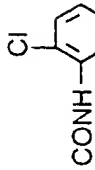
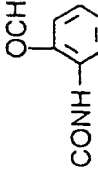
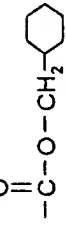
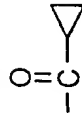
| Compound<br>No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>  | n | R <sup>4</sup>   | R <sup>5</sup>  | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|-----------------|----------------|----------------|-----------------|---|--|---|----------------|----------------|---------------------------------------|
|                 |                |                |                 |   |  |   |                |                |                                       |
| 121             | Cl             | H              | CH <sub>3</sub> | 0 |  | H   | H              | H              | 121 - 122.5 °C                        |
| 122             | Cl             | H              | CH <sub>3</sub> | 0 |  | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6543 |
| 123             | Cl             | H              | CH <sub>3</sub> | 0 | COCH <sub>2</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                    | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6148 |
| 124             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                      | iso-C <sub>3</sub> H <sub>7</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5799 |
| 125             | Cl             | H              | CH <sub>3</sub> | 0 |  | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6081 |
| 126             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>8</sub> H <sub>17</sub> -neo                                | H   | H              | H              | 144 - 146 °C                          |
| 127             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>2</sub> CH(CH <sub>3</sub> )C <sub>2</sub> H <sub>5</sub>  | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6061 |
| 128             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CH <sub>2</sub>                | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6195 |
| 129             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                      | H   | 3-F            | H              | n <sub>D</sub> <sup>20</sup> = 1.6084 |
| 130             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                      | H   | 2-F            | H              | 73 - 76 °C                            |
| 131             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                      | CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>                                       | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6250 |
| 132             | Cl             | H              | CH <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                      |  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5939 |
| 133             | Cl             | H              | CH <sub>3</sub> | 0 | COC <sub>3</sub> H <sub>7</sub> -n   | CH <sub>3</sub>   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6139 |

Table 7 (continued)

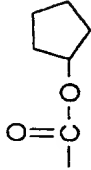
| Compound<br>No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                    | n | R <sup>4</sup>   | R <sup>5</sup>                     | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|-----------------|----------------|----------------|-----------------------------------|---|--|------------------------------------|----------------|----------------|---------------------------------------|
|                 |                |                |                                   |   |  |                                    |                |                |                                       |
| 134             | Cl             | H              | (CH <sub>2</sub> ) <sub>3</sub> F | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H                                  | H              | H              | 69.5 - 77.5 °C                        |
| 135             | Cl             | H              | CH <sub>2</sub> CF <sub>3</sub>   | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H                                  | H              | H              | 147.5 - 154.5 °C                      |
| 136             | Cl             | H              | CH=CH <sub>2</sub>                | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6233 |
| 137             | Cl             | H              | CH <sub>2</sub> Cl                | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H                                  | H              | H              | 102 - 103 °C                          |
| 138             | Cl             | H              | CH <sub>3</sub>                   | 0 | tert-C <sub>4</sub> H <sub>9</sub>   | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5935 |
| 139             | Cl             | H              | CH <sub>3</sub>                   | 0 | CO <sub>2</sub> CH <sub>3</sub>  | COC <sub>3</sub> H <sub>7</sub> -n | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5773 |
| 140             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n                                     | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5927 |
| 141             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -iso                                   | H                                  | H              | H              | 93.5 - 101 °C                         |
| 142             | Cl             | H              | CH <sub>3</sub>                   | 0 | COCH <sub>2</sub> CN   | H                                  | H              | H              | 118 - 125.5 °C                        |
| 143             | Br             | H              | CH <sub>3</sub>                   | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>  | H                                  | H              | H              | 159 - 161 °C                          |
| 144             | Cl             | H              | CH <sub>3</sub>                   | 2 | CH <sub>3</sub>  | H                                  | H              | H              | amorphous                             |
| 145             | Cl             | H              | CH <sub>3</sub>                   | 2 | CH <sub>3</sub>  | CH <sub>3</sub>                    | H              | H              | 133.5 - 136 °C                        |
| 146             | Cl             | H              | CH <sub>3</sub>                   | 2 | C <sub>6</sub> H <sub>5</sub>  | H                                  | H              | H              | 172.5 - 180.5 °C                      |
| 147             | Br             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n                                     | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6162 |
| 148             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -sec                                   | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5944 |
| 149             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | COCH <sub>2</sub> OCH <sub>3</sub>   | H                                  | H              | H              | 86 - 95 °C                            |
| 150             | Cl             | H              | CH=CH <sub>2</sub>                | 0 | CO <sub>2</sub> CH <sub>3</sub>  | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6282 |
| 151             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -iso                                   | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5914 |
| 152             | Cl             | H              | C <sub>2</sub> H <sub>5</sub>     | 0 |  | H                                  | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5878 |

Table 7 (continued)

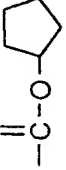
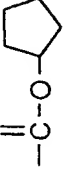
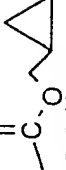
| Compound No. | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                                    | n | R <sup>4</sup>  | R <sup>5</sup>                                | R <sup>6</sup> | R <sup>7</sup> | melting point or refractive index     |
|--------------|----------------|----------------|---|---|---|---|----------------|----------------|---------------------------------------|
| 153          | Cl             | H              | CH <sub>3</sub>                                   | 2 |   | CH <sub>3</sub>                               | H              | H              | 63 - 66.5 °C                          |
| 154          | Cl             | H              | C <sub>2</sub> H <sub>5</sub>                     | 0 |   | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5843 |
| 155          | Cl             | H              | CH <sub>3</sub>                                   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | COC <sub>2</sub> H <sub>5</sub>               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5756 |
| 156          | Cl             | H              | C <sub>2</sub> H <sub>5</sub>                     | 0 | CO <sub>2</sub> C <sub>3</sub> H <sub>7-n</sub>                                     | COC <sub>3</sub> H <sub>7-n</sub>             | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5681 |
| 157          | Cl             | H              | CH <sub>2</sub> F                                 | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6051 |
| 158          | Cl             | H              | CH <sub>3</sub>                                   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5931 |
| 159          | Cl             | H              | C <sub>2</sub> H <sub>5</sub>                     | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | C <sub>3</sub> H <sub>5-iso</sub>             | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5694 |
| 160          | Br             | H              | CH <sub>3</sub>                                   | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | C <sub>3</sub> H <sub>5-iso</sub>             | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5956 |
| 161          | Cl             | H              | CH <sub>3</sub>                                   | 0 | COCH <sub>2</sub> OCH <sub>3</sub>  | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5850 |
| 162          | Cl             | H              | CH <sub>3</sub>                                   | 0 |  | H   | H              | H              | 109 - 114.5 °C                        |
| 163          | Cl             | H              | CH <sub>3</sub>                                   | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9-sec</sub>                                   | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5901 |
| 164          | Br             | H              | C <sub>2</sub> H <sub>5</sub>                     | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6231 |
| 165          | Cl             | H              | C <sub>2</sub> H <sub>5</sub>                     | 0 | CO <sub>2</sub> CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>                   | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5811 |
| 166          | Cl             | H              | CH <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>    | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H   | H              | H              | 70 - 72 °C                            |
| 167          | Cl             | H              | CH <sub>2</sub> OCH <sub>3</sub>                  | 0 | CO <sub>2</sub> CH <sub>3</sub>   | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6141 |
| 168          | Cl             | H              | CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H   | H              | H              | 74 - 75 °C                            |

Table 7 (continued)

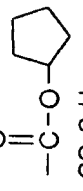
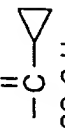
| Compound | No.            |                |                                 |  |   |                | n | R <sup>3</sup>                  | R <sup>4</sup> | R <sup>5</sup> | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|----------|----------------|----------------|---------------------------------|--|---|----------------|---|---------------------------------|----------------|----------------|----------------|----------------|---------------------------------------|
|          | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                  | R <sup>4</sup>   | R <sup>5</sup>  | R <sup>6</sup> |   |                                 |                |                |                |                |                                       |
| 169      | Cl             | H              | CH <sub>3</sub>                 | CO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub> | H   | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6336 |
| 170      | Cl             | H              | CH <sub>3</sub>                 | H  | CO <sub>2</sub> CH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>                   | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5702 |
| 171      | Cl             | H              | CH <sub>3</sub>                 | H  |    | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6133 |
| 172      | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | H  | -CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n                                   | H              | 0 | n-C <sub>3</sub> H <sub>7</sub> |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6018 |
| 173      | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | H  | CO <sub>2</sub> CH <sub>3</sub>   | H              | 1 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | 156.5 - 169 °C                        |
| 174      | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | H  | CO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>                                     | H              | 1 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | 101.5 - 107 °C                        |
| 175      | Cl             | H              | n-C <sub>3</sub> H <sub>7</sub> | H  | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n                                    | H              | 1 | n-C <sub>3</sub> H <sub>7</sub> |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5681 |
| 176      | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | H  | CO <sub>2</sub> CH <sub>3</sub>   | H              | 1 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | 163 - 168.5 °C                        |
| 177      | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | H  | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H              | 1 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | 131 - 135 °C                          |
| 178      | Cl             | H              | CH <sub>3</sub>                 | H  | CO(CH <sub>2</sub> ) <sub>8</sub> Br  | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6021 |
| 179      | Cl             | H              | CH <sub>3</sub>                 | H  |  | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | 117 - 120.5 °C                        |
| 180      | Cl             | H              | CH <sub>3</sub>                 | n-C <sub>4</sub> H <sub>9</sub>                                  | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5828 |
| 181      | Cl             | H              | CH <sub>3</sub>                 | COC <sub>4</sub> H <sub>9</sub> -n                               | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H              | 0 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5770 |
| 182      | Cl             | H              | C <sub>2</sub> H <sub>5</sub>   | C <sub>2</sub> H <sub>5</sub>                                    | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H              | 0 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5822 |
| 183      | Br             | H              | C <sub>2</sub> H <sub>5</sub>   | C <sub>2</sub> H <sub>5</sub>                                    | CO <sub>2</sub> C <sub>3</sub> H <sub>7</sub> -n                                    | H              | 0 | C <sub>2</sub> H <sub>5</sub>   |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5870 |
| 184      | Cl             | H              | CH <sub>3</sub>                 | C <sub>2</sub> H <sub>5</sub>                                    | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>                                       | H              | 1 | CH <sub>3</sub>                 |                |                | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5834 |

Table 7 (continued)

| Compound | No. |                |                               | n | R <sup>4</sup>                                | R <sup>5</sup>                                | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|----------|-----|----------------|-------------------------------|---|---|---|----------------|----------------|---------------------------------------|
|          | No. | R <sup>1</sup> | R <sup>2</sup>                |   |   |   |                |                |                                       |
| 185      | Cl  | H              | CH <sub>3</sub>               | 0 | H   | COCOC <sub>2</sub> H <sub>5</sub>             | H              | H              | 118 - 123 °C                          |
| 186      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> CH=CH <sub>2</sub>            | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5962 |
| 187      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> C≡CH                          | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5944 |
| 188      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>2</sub> CH <sub>2</sub> F             | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5837 |
| 189      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | 30 - 38 °C                            |
| 190      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>3</sub>                               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6021 |
| 191      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5922 |
| 192      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>3</sub>                               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5930 |
| 193      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CH <sub>3</sub>                               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5622 |
| 194      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5852 |
| 195      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5854 |
| 196      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CO <sub>2</sub> CH <sub>3</sub>               | CH <sub>3</sub>                               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6182 |
| 197      | Cl  | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CO <sub>2</sub> CH <sub>3</sub>               | CH <sub>3</sub>                               | H              | H              | 58 - 62 °C                            |
| 198      | Br  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6020 |
| 199      | Br  | H              | CH <sub>3</sub>               | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | C <sub>2</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5950 |
| 200      | Br  | H              | CH <sub>3</sub>               | 2 | C <sub>2</sub> H <sub>5</sub>                 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5880 |
| 201      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CO <sub>2</sub> CH <sub>3</sub>               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5852 |
| 202      | Cl  | H              | CH <sub>3</sub>               | 1 | CO <sub>2</sub> CH <sub>3</sub>               | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5858 |
| 203      | Cl  | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5728 |

Table 7 (continued)

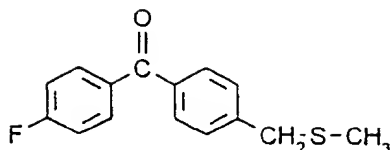
| Compound | No.            |                |                               | n | R <sup>4</sup>                                     | R <sup>5</sup>                                  | R <sup>6</sup> | R <sup>7</sup> | melting point or<br>refractive index  |
|----------|----------------|----------------|-------------------------------|---|--|---|----------------|----------------|---------------------------------------|
|          | R <sup>1</sup> | R <sup>2</sup> | R <sup>3</sup>                |   |  |   |                |                |                                       |
| 204      | Cl             | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -iso | C <sub>2</sub> H <sub>5</sub>                   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5783 |
| 205      | Cl             | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | (CH <sub>2</sub> ) <sub>5</sub> CH <sub>3</sub> | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5749 |
| 206      | Cl             | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>    | C <sub>2</sub> H <sub>5</sub>                   | H              | H              | amorphous                             |
| 207      | Cl             | H              | CH <sub>3</sub>               | 0 | COC <sub>3</sub> H <sub>7</sub> -iso               | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6528 |
| 208      | Cl             | H              | CH <sub>3</sub>               | 1 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -n   | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5944 |
| 209      | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> -iso | H   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5763 |
| 210      | Cl             | H              | CH <sub>3</sub>               | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | CH <sub>2</sub> CN                              | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5977 |
| 211      | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 0 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COC <sub>6</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5990 |
| 212      | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 1 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COC <sub>6</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5890 |
| 213      | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>      | COC <sub>6</sub> H <sub>5</sub>                 | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5980 |
| 214      | Cl             | H              | CH <sub>3</sub>               | 0 | COCH <sub>3</sub>                                  | C <sub>2</sub> H <sub>5</sub>                   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6140 |
| 215      | Cl             | H              | C <sub>2</sub> H <sub>5</sub> | 2 | COC <sub>3</sub> H <sub>7</sub> -n                 | C <sub>2</sub> H <sub>5</sub>                   | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.5808 |
| 216      | Cl             | H              | CH <sub>3</sub>               | 0 | COC <sub>6</sub> H <sub>5</sub>                    | COCH <sub>3</sub>                               | H              | H              | n <sub>D</sub> <sup>20</sup> = 1.6308 |

## Synthesis of Intermediates

## Synthesis Example 8

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10



15 To an acetonitrile solution (200 ml) of 4-bromomethyl-4'-fluorobenzophenone (20 g), an aqueous 15% sodium methylmercaptan solution (60 ml) was added and the mixture was heated for 6 hours with refluxing. After the reaction mixture was restored to room temperature, water (500 ml) and toluene (300 ml) were added. The organic layer was separated, which was then successively washed with an aqueous 2N sodium hydroxide solution and water, and dried over anhydrous magnesium sulfate. After distilling off the solvent, the crude product was purified by silica gel column chromatography (developing solvent n-hexane:ethyl acetate = 9:1) to obtain 4-fluoro-4'-methylmercaptomethylbenzophenone (17 g).

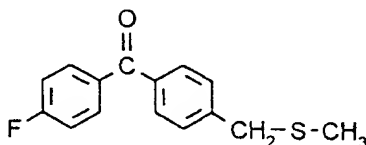
20

$n_D^{20}$  1.6375

## Synthesis Example 9

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35

To an ether solution (30 ml) of 4-bromofluorobenzene (1.75 g), 1.6 M n-butyllithium hexane solution (6.3 ml) was added at -78°C, and the mixture was stirred for an hour at the same temperature. An ether solution (10 ml) of 4-methylmercaptomethylbenzonitrile (1.63 g) was dropwise added thereto at -78 °C, and the mixture was stirred for 16 hours while restoring the mixture gradually to room temperature. To the reaction mixture, an aqueous 6 N hydrochloric acid was added and stirred for an hour at room temperature, and ether (20 ml) was added. Then the organic layer was separated, and washed with water, followed by drying over anhydrous magnesium sulfate. After distilling off the solvent, the obtained crude product was purified by silica gel column chromatography (developing solvent, n-hexane : ethyl acetate = 9 : 1) to obtain 4-fluoro-4'-methylmercaptomethylbenzophenone (1.12 g).

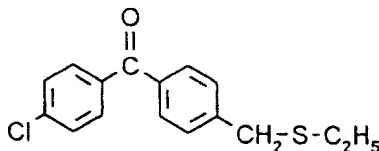
40

$n_D^{20}$  1.6375

45

## Synthesis Example 10

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55

S-(4-(4-chlorobenzoyl)benzyl)thiuronium bromide (3.3 g) and potassium carbonate (1.5 g) were dissolved in dimethylformamide (20 ml). A methanol solution (10 ml) of potassium hydroxide (1.0 g) was added and stirred at room temper-

ature for 30 minutes. To the reaction mixture, water (100 ml) and toluene (100 ml) were added. The organic layer was separated, and washed with water and an aqueous saturated sodium chloride solution, followed by drying over anhydrous magnesium sulfate. After distilling off the solvent, the crude product was purified by silica gel column chromatography (developing solvent: ethyl acetate:hexane = 1:9) to obtain 4-chloro-4'-ethylmercaptomethylbenzophenone (1.3 g).

melting point: 34 - 35 °C

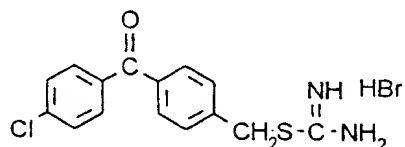
4-chloro-4'-difluoromethylmercaptomethylbenzophenone (0.8 g) was obtained in the same manner as in Synthesis Example 10 by using bromodifluoromethane (3.9 g) instead of ethyl iodide.

melting point: 60 - 62 °C

4-chloro-4'-trifluoromethylmercaptomethylbenzophenone (0.4 g) was obtained in the same manner as in Synthesis Example 10 by using trifluoromethyl iodide (5.9 g) instead of ethyl iodide.

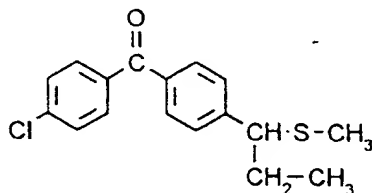
melting point: 78 - 79 °C

#### Synthesis Example 11 (Synthesis of starting material for Synthesis Example 10)



An acetone solution (500 ml) of 4-bromomethyl-4'-chlorobenzophenone (31 g) and thiourea (10 g) was heated for 30 minutes with refluxing. The precipitated crystals were then collected by filtration and washed with acetone to obtain S-(4-(4-chlorobenzoyl)benzyl)thiuronium bromide (33 g). melting point: 76 - 78 °C

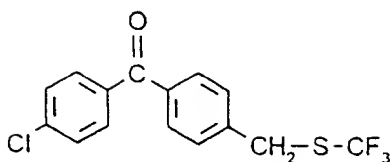
#### Synthesis Example 12



To a tetrahydrofuran solution (30 ml) of lithium diisopropylamide which was prepared from a 1.6 M n-butyllithium hexane solution (12.5 ml) and diisopropylamine (2.1 g), a tetrahydrofuran solution (10 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (2.8 g) was added at -78 °C, and the mixture was stirred for 30 minutes at the same temperature. Ethyl iodide (3.0 g) was subsequently added thereto at -78 °C, and the mixture was stirred for 6 hours while restoring the mixture gradually to room temperature. After completing the reaction, the reaction mixture was washed with aqueous 5% ammonium chloride solution and aqueous saturated sodium chloride solution, and dried over anhydrous magnesium sulfate. After distilling off the solvent, the obtained crude product was purified by silica gel column chromatography (developing solvent: n-hexane:ethyl acetate = 4:1) to obtain 4-chloro-4'-(1-methylmercaptopropyl)benzophenone (0.3 g) as oily substance.

<sup>1</sup>H-NMR (90 MHz, CDCl<sub>3</sub>) (0.93 3H t) (1.88 3H s) (1.96 2H m) (3.63 1H t) (7.27-7.80 8H m)

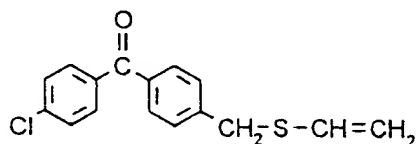
## Synthesis Example 13



To a pyridine solution (30 ml) of 4-(4-chlorobenzoyl)benzylthiocyanate (1.5 g) and benzylthiocyanate (1.5 g), zinc powder (0.4 g) was added and stirred at room temperature for 24 hours under trifluoromethyl iodide atmosphere. Then toluene (50 ml) was added and zinc powder was filtered off. The filtrate was washed with 2N HCl aq. (30 ml three times) and dried over anhydrous magnesium sulfate. After the solvent was evaporated the residue was purified by means of column chromatography (n-hexane : ethylacetate = 6 : 1). Then 4-chloro-4'-trifluoromethylmercaptobenzophenone (0.5 g) was obtained.

melting point: 78 -79°C

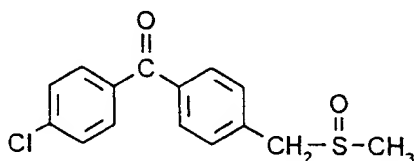
## Synthesis Example 14



A mixture of 4-chloro-4'-(2-chloroethylmercaptomethyl)benzophenone (4.9 g) and 1,8-diaza-bicyclo[5.4.0]undec-7-ene (4.3 g) in 100ml of toluene was stirred for 3 hours at 80 °C. After that, the mixture was washed with aqueous 2N hydrochloric acid solution and water, followed by drying over anhydrous sodium-sulfate. The solvent was distilled off under reduced pressure to obtain 4-chloro-4'-vinylmercaptomethylbenzophenone (4.3 g).

$n_D^{20}$  1.6363

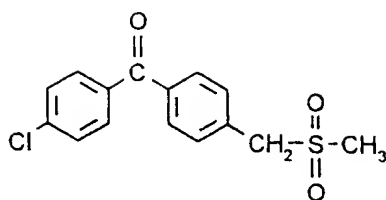
## Synthesis Example 15



To an acetic acid solution (30 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (8.3 g), aqueous 30% hydrogen peroxide solution (3.5 ml) was added, and the mixture was stirred for 2 hours while keeping at 10°C. To the reaction solution, water (200 ml) and toluene (200 ml) were added, and then the organic layer was separated, and washed successively with water, an aqueous sodium bicarbonate solution and an aqueous saturated sodium chloride solution, followed by drying over anhydrous magnesium sulfate. After distilling off the solvent, the crude product was purified by silicagel column chromatography (developing solvent: acetone:n-hexane = 50:50) to obtain 4-chloro-4'-methylsulfinylmethylbenzophenone (5.3 g).

melting point: 125 -128°C

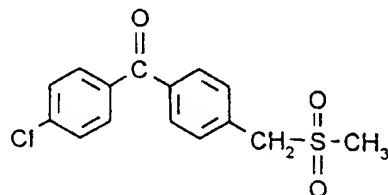
## Synthesis Example 16



15 4-Chloro-4'-methylsulfonylmethylbenzophenone (2.9 g) and m-chloroperbenzoic acid (2.5 g) were dissolved in dichloromethane, and the mixture was stirred for 12 hours at 0°C. After the precipitated crystals were filtered off, the filtrate was successively washed with aqueous sodium bicarbonate solution, aqueous 5% sodium thiosulfate solution and water, and dried over anhydrous magnesium sulfate. After distilling off the solvent, the crude product was purified by silica gel column chromatography (developing solvent: ethyl acetate:n-hexane = 1:5) to obtain 4-chloro-4'-methylsulfonylmethylbenzophenone (1.8 g).

20 melting point: 173 - 174°C

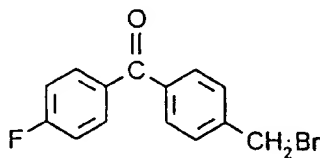
## Synthesis Example 17



35 To an acetic acid solution (70 ml) of 4-chloro-4'-methylmercaptomethylbenzophenone (8.3 g), aqueous 30% hydrogen peroxide solution (7 ml) was added at room temperature, and the mixture was stirred for 6 hours at 70°C. The reaction mixture was poured into ice-water, and the precipitated crystals were collected by filtration, and washed with an aqueous sodium bicarbonate solution and water. The crystals were then air-dried to obtain 4-chloro-4'-methylsulfonylmethylbenzophenone (4.3 g).

40 melting point: 173 - 174°C

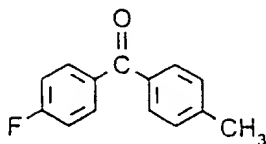
## Reference Example 1 (Synthesis of starting materials for Synthesis Example 8)



55 A carbon tetrachloride solution (200 ml) of 4-fluoro-4'-methylbenzophenone (16 g), N-bromosuccinimide (14.2 g) and 2,2'-azodi-isobutyronitrile (0.1 g) was heated for 16 hours with refluxing. After the mixture was cooled to a room temperature, the precipitates were collected by filtration, and the solvent was distilled off to obtain 4-bromomethyl-4'-fluorobenzophenone (20 g).

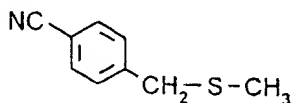
melting point: 73 - 75°C

## Reference Example 2 (Synthesis of starting material for Reference Example 1)



Into a toluene suspension (200 ml) of aluminum chloride (26 g), a toluene solution (50 ml) of p-fluorobenzoyl chloride (16 g) was dropwise added at a room temperature. Subsequently, the mixture was stirred for 20 hours at a room temperature, and then carefully poured into ice-water. Toluene (200 ml) was added thereto, and then the organic layer was separated, and washed successively with aqueous 2N hydrochloric acid solution, water and aqueous saturated sodium chloride solution, followed by drying over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain 4-fluoro-4'-methylbenzophenone (16 g).  
melting point: 97 - 98°C

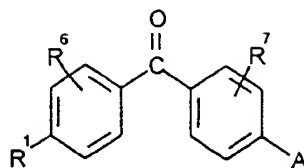
## Reference Example 3 (Synthesis of starting material for Synthesis Example 9)



To an acetonitrile solution (500 ml) of 4-cyanobenzyl bromide (50 g), 15% methyl mercaptan sodium salt (120 ml) was added at a room temperature and heated for 6 hours with refluxing. After cooling to a room temperature, water (1 l) and toluene (1 l) was added thereto. The organic layer was separated and washed successively with an aqueous 2N sodium hydroxide solution sulfate. After distilling off the solvent, 4-methylmercaptomethylbenzonitrile (38 g) was obtained.  
 $n_D^{20}$  1.5821

The following Table 8 shows the compounds synthesized in the above Synthesis Examples 8 to 17 together with compounds synthesized in the same manner as those in the Synthesis Examples 8 to 17.

Table 8



|    | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup>    | A   | Melting Point or<br>Refractive Index |
|----|----------------|----------------|-------------------|---|--------------------------------------|
| 15 | Br             | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr         | 225 - 231 °C                         |
|    | Cl             | H              | H                 | CH(CH <sub>3</sub> )SC(=NH)NH <sub>2</sub> ·HBr     | 158 - 159 °C                         |
|    | Cl             | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr         | 76 - 78 °C                           |
| 20 | Cl             | H              | 2-Cl              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr         | 110 - 114 °C                         |
|    | Cl             | H              | 3-Cl              | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr         | 198 - 201 °C                         |
|    | I              | H              | H                 | CH <sub>2</sub> SC(=NH)NH <sub>2</sub> ·HBr         | 196 - 210 °C                         |
| 25 | Cl             | H              | H                 | CH <sub>2</sub> SCN                                 | 149 - 150 °C                         |
|    | Cl             | H              | H                 | CH <sub>2</sub> S(CS)OC <sub>2</sub> H <sub>5</sub> | 62 - 68 °C                           |
|    | Cl             | H              | H                 | CH <sub>2</sub> S(CO)CH <sub>3</sub>                | 98 - 99 °C                           |
|    | Br             | H              | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>      | 46 - 48 °C                           |
| 30 | Cl             | H              | H                 | CH(CH <sub>3</sub> )SCH <sub>3</sub>                | n <sub>D</sub> <sup>20</sup> 1.6198  |
|    | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>2</sub> H <sub>5</sub>      | 34 - 35 °C                           |
|    | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>3</sub> H <sub>7</sub> -iso | n <sub>D</sub> <sup>20</sup> 1.6320  |
| 35 | Cl             | H              | H                 | CH <sub>2</sub> SC <sub>3</sub> H <sub>7</sub> -n   | n <sub>D</sub> <sup>20</sup> 1.6211  |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCF <sub>3</sub>                    | 78 - 79 °C                           |
| 40 | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> C≡CH               | 80 - 81 °C                           |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>3</sub>    | 77 - 78 °C                           |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH=CH <sub>2</sub>                 | n <sub>D</sub> <sup>20</sup> 1.6363  |
| 45 | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH=CH <sub>2</sub> | n <sub>D</sub> <sup>20</sup> 1.6368  |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> Cl | 65 - 67 °C                           |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> F  | 44 - 45 °C                           |
| 50 | Cl             | H              | 3-Br              | CH <sub>2</sub> SCH <sub>3</sub>                    | n <sub>D</sub> <sup>20</sup> 1.6502  |
|    | Cl             | H              | 3-CH <sub>3</sub> | CH <sub>2</sub> SCH <sub>3</sub>                    | n <sub>D</sub> <sup>20</sup> 1.6345  |

Table 8 (continued)

|    | R <sup>1</sup> | R <sup>6</sup> | R <sup>7</sup>    | A   | Melting Point or<br>Refractive Index  |
|----|----------------|----------------|-------------------|---|---------------------------------------|
| 5  |                |                |                   |   |                                       |
| 10 | Cl             | H              | 2-CH <sub>3</sub> | CH <sub>2</sub> SCH <sub>3</sub>                                    | n <sub>D</sub> <sup>20</sup> = 1.6324 |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCHF  | n <sub>D</sub> <sup>20</sup> 1.6237   |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCHF <sub>2</sub>                                   | 60 - 62 °C                            |
| 15 | Cl             | H              | H                 | CH <sub>2</sub> (SO <sub>2</sub> )CH <sub>3</sub>                   | 173 - 174 °C                          |
|    | Cl             | H              | H                 | CH <sub>2</sub> (SO)CH <sub>3</sub>                                 | 125 - 128 °C                          |
|    | Cl             | 2-Cl           | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    | n <sub>D</sub> <sup>20</sup> 1.6369   |
| 20 | Cl             | 3-Cl           | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    | 66 - 67 °C                            |
|    | F              | H              | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    | n <sub>D</sub> <sup>20</sup> 1.6375   |
|    | F              | 3-F            | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    | n <sub>D</sub> <sup>20</sup> 1.6306   |
| 25 | I              | H              | H                 | CH <sub>2</sub> SCH <sub>3</sub>                                    | 89 - 91 °C                            |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CN                                 | 87.5 - 88 °C                          |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CHF <sub>2</sub>                   | 59 - 60.5 °C                          |
| 30 | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> Cl | n <sub>D</sub> <sup>20</sup> 1.6113   |
|    | Br             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CF <sub>3</sub>                    | 79.5 - 81.5 °C                        |
| 35 | Br             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CHF <sub>2</sub>                   | 62 - 64 °C                            |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> F  | 39 - 40.5 °C                          |
|    | Cl             | H              | H                 | CH <sub>2</sub> SCH <sub>2</sub> Si(CH <sub>3</sub> ) <sub>3</sub>  | 95 - 100 °C                           |
| 40 |                |                |                   |   |                                       |

**Biological Test Examples**

45

**Preparation of test solutions**

Solvent: 3 parts by weight of xylol

Emulsifier: 1 part by weight of polyoxyethylene alkyl phenyl ether

50

To produce a suitable preparation of active compound, 1 part by weight of active compound was mixed with the stated amount of solvent containing the stated amount of emulsifier, and the mixture was diluted with water to the prescribed concentration to prepare test solutions.

55

**Test Example 1 (Test against *Spodoptera litura* larvae)****Testing procedure**

5 Leaves of cabbage (*Brassica oleracea*) were dipped into the solution of the active compound at the prescribed concentration. After air-drying the solution, the treated leaves were placed in a petridish, and ten third-instar larvae of common cutworm (*Spodoptera litura*) were released. The dish was then placed at an incubation chamber of 25°C. After 7 days, the number of dead larvae was examined to calculate mortality in %. The test was conducted with 2 replications, and the mortality in % is shown in their average.

10

**Results**

Compound Nos. 8, 12, 16, 34, 37, 43, 48, 50, 54, 57, 60, 63, 74, 83, 92, 106, 171, 121, 125, 132, 139, 140, 141, 142, 147, 148, 149, 151, 152, 155, 157, 158, 159, 160, 161, 162, 163, 164, 165, 168, 170, 171, 172, 173, 174, 175 and  
 15 176 exhibited 100 % of mortality at the concentration of 200 ppm, and compound Nos. 1, 5, 22, 29, 33, 40, 47, 49, 68, 75, 79, 87, 100, 111, 113, 116, 123, 130, 133, 135, 136, 137, 143, 144, 145, 150, 154, 156 and 169 exhibited 100 % of mortality at the concentration of 100 ppm.

**Test Example 2 (Test against *Aulacophora femoralis* )**

20

**Testing procedure**

Leaves of cucumber (*Cucumis sativus* ) were dipped into the solution of the active compound at the prescribed concentration. After air-drying the solution, the treated leaves were placed in a Petridish, and ten second-instar larvae  
 25 of cucurbit leaf beetle (*Aulacophora femoralis*) were released. The dish was then placed at an incubation chamber of 25°C. After 7 days, the number of dead larvae was examined to calculate mortality in %. The test was conducted with 2 replications, and the mortality in % is shown in their average.

**Results**

30

Compound Nos. 3, 7, 15, 18, 23, 25, 31, 36, 39, 44, 51, 58, 59, 61, 65, 73, 77, 78, 84, 85, 91, 93, 96, 98, 101, 103, 109, 114, 115, 119, 120, 126, 129, 131, 133, 135, 136, 140, 145, 148, 150, 152, 154, 156, 163, 167, 169, 170 and 172 exhibited 100 % of mortality at the concentration of 200 ppm.

**Test Example 3 (Test against *Plutella xylostella* larvae resistant to benzoylureas)****Testing procedure**

Leaves of cabbage (*Brassica oleracea*) were dipped into the solution of the active compound at the prescribed concentration. After air-drying the solution, the treated leaves were placed in a petridish, and ten second-instar larvae of diamondback moth (*Plutella xylostella* ) resistant to benzoylureas were released. The dish was then placed at an incubation chamber of 25°C. After 7 days, the number of dead larvae was examined to calculate mortality in %. The test was conducted with 2 replications, and the mortality in % is shown in their average.

**Results**

45

Compound Nos. 2, 11, 15, 17, 20, 26, 28, 30, 35, 41, 45, 53, 56, 62, 69, 71, 81, 86, 88, 90, 97, 99, 102, 104, 107, 127, 134, 139, 142, 147, 149, 152, 154, 156, 159, 167 and 168 exhibited 100 % of mortality at the concentration of 200 ppm.

50

**Test Example 4 (Test against *Cnaphalocrocis medinalis* )****Testing procedure**

55 The solution of the active compound at the prescribed concentration were spread on 3.5-leaf stage of rice. After air-drying the solution, the treated leaves were cut and were placed in a Petridish, and ten third-instar larvae of rice leaf-roller (*Cnaphalocrocis medinalis*) were released. The dish was then placed at an incubation chamber of 25°C. After 7 days, the number of dead larvae was examined to calculate mortality in %. The test was conducted with 2 replications, and the mortality in % is shown in their average.

## Results

Compound Nos. 4, 9, 10, 13, 24, 27, 32, 42, 46, 52, 55, 64, 67, 70, 72, 76, 82, 89, 94, 95, 105, 108, 110, 112, 124, 128, 140, 148, 151, 160, 163 and 165 exhibited 100 % of mortality at the concentration of 50 ppm.

Test Example 5 (Test against *Diabrotica balteata*)

## Preparation of test formulation

carrier: 7 parts by weight of Kaolin  
emulsifier: 1 part by weight of detergent

For the seed treatment a certain amount of active ingredient is solved acetone and mixed into a the stated amount of carrier containing the stated amount of emulsifier.

For seed coating 200 mg of the formulation are dispersed with 0.2 ml of water within a plastic pot. 10 g of maize are added to the dispersion and mixed thoroughly on rotary shaker for 2 minutes.

## Testing procedure

After drying of the seed coating five treated/untreated seedcorns were added into 300 ml of standardized wet soil and kept at a temperature of 20 °C. Two replications are prepared for each preparation.

After two days each pot is infested with 20 second-instar-larvae of *Diabrotica balteata*, seven days after infestation the number of emerged plants per pot is counted.

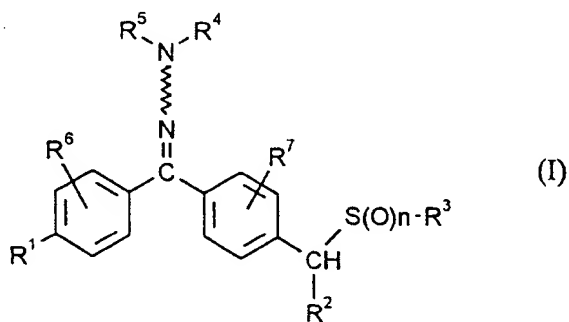
The efficacy is calculated to 100 % Abbot, if all plants emerged and to 0 % Abbot, if no plant emerged.

## Results

Compound Nos. 8, 39, 70 and 95 exhibited 100 % of mortality at the 0.1 g of the active ingredient per 10 g seedcorns.

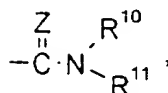
## Claims

1. Compounds of the formula:



wherein

- $R^1$  is halogen,  
 $R^2$  is hydrogen or  $C_{1-4}$  alkyl,  
 $R^3$  is cyano, optionally substituted  $C_{1-4}$  alkyl,  $C_{2-4}$  alkenyl or  $C_{3-4}$  alkynyl,  $C_{1-4}$  alkyl-carbonyl or  $C_{1-4}$  alkoxy-thiocarbonyl,  
 $R^4$  is hydrogen, phenyl, optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{1-8}$  alkyl, optionally substituted  $C_{2-8}$  alkenyl,  $-CO-R^8$ ,  $-CO-O-R^9$  or



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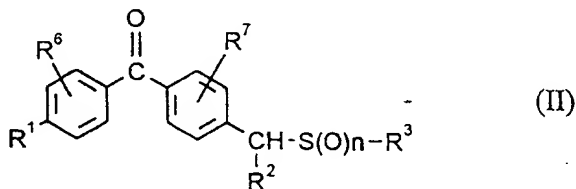
- $\text{R}^5$  is hydrogen, formyl, phenyl, optionally substituted  $\text{C}_{1-8}$  alkyl, optionally substituted  $\text{C}_{2-8}$  alkenyl, optionally substituted  $\text{C}_{3-8}$  alkynyl, optionally substituted  $\text{C}_{1-8}$  alkyl-carbonyl, optionally substituted  $\text{C}_{1-6}$  alkyl-oxalyl, optionally substituted  $\text{C}_{1-8}$  alkoxy-carbonyl, optionally substituted  $\text{C}_{1-8}$  alkoxy-oxalyl, optionally substituted  $\text{C}_{3-8}$  cycloalkyl-carbonyl, optionally substituted  $\text{C}_{2-8}$  alkenyl-carbonyl or optionally substituted benzoyl,  
 $\text{R}^6$  is hydrogen or halogen,  
 $\text{R}^7$  is hydrogen, halogen or  $\text{C}_{1-2}$  alkyl,  
 $n$  is 0, 1 or 2, provided that  $n$  is 0 when  $\text{R}^3$  is cyano,  $\text{C}_{1-4}$  alkyl-carbonyl or  $\text{C}_{1-4}$  alkoxy-thiocarbonyl,  
 $\text{Z}$  is a single bond of Anti form or of Syn form,  
 $\text{R}^8$  is optionally substituted  $\text{C}_{1-8}$  alkyl, optionally substituted  $\text{C}_{2-8}$  alkenyl, optionally substituted phenyl, optionally substituted  $\text{C}_{3-8}$  cycloalkyl, optionally substituted  $\text{C}_{1-8}$  alkyl-carbonyl or optionally substituted  $\text{C}_{1-8}$  alkoxy-carbonyl, or hydrogen,  
 $\text{R}^9$  is optionally substituted  $\text{C}_{1-8}$  alkyl, optionally substituted  $\text{C}_{3-8}$  cycloalkyl, optionally substituted  $\text{C}_{2-8}$  alkenyl or optionally substituted  $\text{C}_{3-8}$  alkynyl,  
 $\text{R}^{10}$  is hydrogen or  $\text{C}_{1-4}$  alkyl,  
 $\text{R}^{11}$  is hydrogen, optionally substituted  $\text{C}_{1-4}$  alkyl or optionally substituted phenyl and,  
 $\text{Z}$  is oxygen or sulfur.

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2. Process for the preparation of compounds of formula (I) according to claim 1, characterized in that

(a) in the case where  $\text{R}^5$  is hydrogen:  
 compounds of the formula (II)

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wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ ,  $\text{R}^6$ ,  $\text{R}^7$  and  $n$  are defined as in claim 1, are reacted with compounds of the formula (III)

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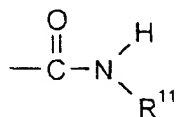
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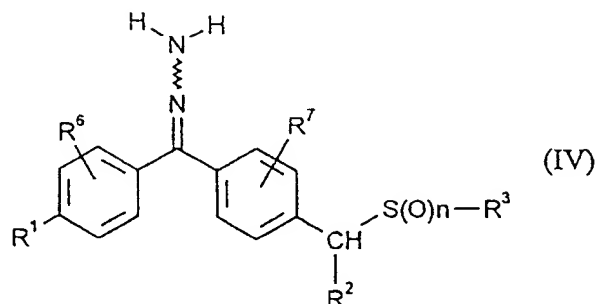
wherein  $\text{R}^4$  is defined as in claim 1;  
 in the presence of an inert solvent, and, if appropriate, in the presence of an acid catalyst,  
 or

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(b) in the case where  $R^5$  is hydrogen and  $R^4$  is



and  $R^{11}$  is not hydrogen, then  $R^{11}$  is replaced by  $R^{12}$ , then  $R^{12}$  is optionally substituted  $C_{1-4}$  alkyl or optionally substituted phenyl:  
compounds of the formula (IV)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^6$ ,  $R^7$  and  $n$  are defined as above, are reacted with compound of the formula (V)



wherein  $R^{12}$  is optionally substituted  $C_{1-4}$  alkyl or optionally substituted phenyl,  
in the presence of an inert solvent,

or

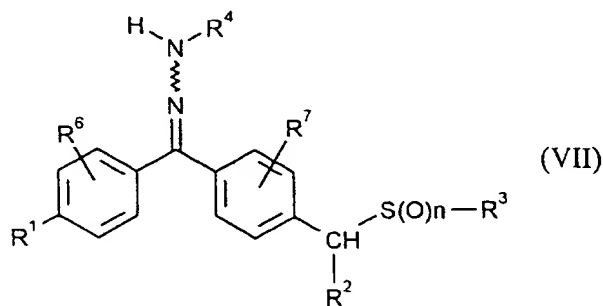
(c) in the case where  $R^4$  is  $-\text{CO}-\text{R}^8$  or  $-\text{CO}-\text{O}-\text{R}^9$ , provided that  $R^8$  is not hydrogen, then  $R^8$  or  $-\text{O}-\text{R}^9$  is replaced by  $R^{13}$ , the aforementioned compounds of the formula (IV) are reacted with compounds of the formula (VI)



wherein hal is chlorine or bromine and  $R^{13}$  is  $R^8$  or  $-\text{O}-\text{R}^9$ ,  
in the presence of an inert solvent, and if appropriate in the presence of an acid binder,

or

(d) in the case where  $R^5$  is not hydrogen, then  $R^5$  is replaced by  $R^{14}$ : compounds of the formula (VII)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^6$ ,  $R^7$  and  $n$  have the same meaning as mentioned above,  
are reacted with compounds of the formula (VIII)



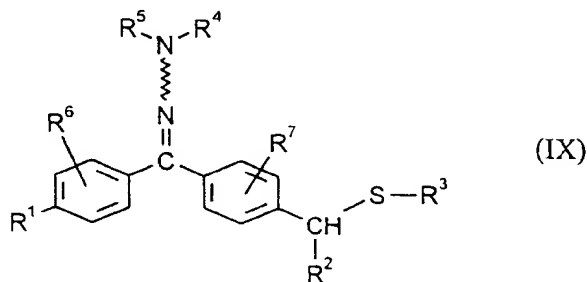
(VIII)

wherein hal and  $R^{14}$  have the same meaning as mentioned above, in the presence of an inert solvent,  
and if appropriate in the presence of an acid binder,

or

(e) in the case where  $n$  is 1:

compounds the formula (IX)

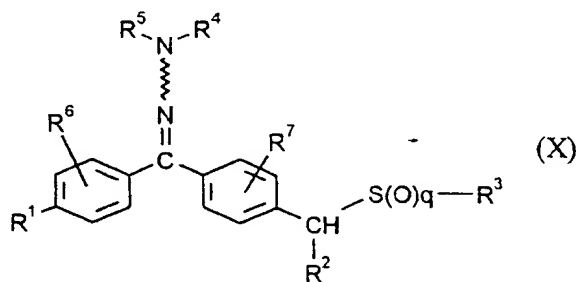


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  have the same meaning as mentioned above,  
are oxidized in the presence of an inert solvent,

or

(f): in the case where  $n$  is 2:

compounds of the formula (X)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  have the same meanings as mentioned above and  $q$  is 0 or 1,  
are oxidized in the presence of an inert solvent.

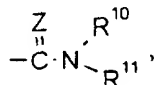
3. Compounds of formula (I) according to claim 1, wherein

$R^1$  is halogen,

$R^2$  is hydrogen or  $C_{1-3}$  alkyl,

$R^3$  is cyano,  $C_{1-4}$  alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano, methoxy, ethoxy and trimethylsilyl or is  $C_{2-3}$  alkenyl, propargyl, methyl-carbonyl, methoxy-thiocarbonyl or ethoxy-thiocarbonyl,

R<sup>4</sup> is hydrogen, C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, phenyl, or is benzyl, -CO-R<sup>8</sup>, -CO-O-R<sup>9</sup> or



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10 R<sup>5</sup> is hydrogen, formyl, phenyl, C<sub>1-6</sub> alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano, C<sub>1-4</sub> alkoxy, C<sub>1-4</sub> alkylthio, hydroxycarbonyl, C<sub>1-4</sub> alkoxy-carbonyl, phenyl, phenyl which is substituted by halogen and methoxyphenyl or is C<sub>2-6</sub> alkenyl, C<sub>3-6</sub> alkynyl, C<sub>1-6</sub> alkyl-carbonyl, C<sub>1-6</sub> halogenalkyl-carbonyl, C<sub>1-4</sub> alkoxy-C<sub>1-6</sub> alkyl-carbonyl, C<sub>1-6</sub> alkyl-oxalyl, C<sub>1-6</sub> alkoxy-carbonyl which may be substituted by one or more than one substituent selected from the group consisting of C<sub>3-6</sub> cycloalkyl and C<sub>1-4</sub> alkoxy or is C<sub>1-6</sub> alkoxy-oxalyl, C<sub>3-6</sub> cycloalkyl-carbonyl which may be substituted by C<sub>1-4</sub> alkyl, C<sub>2-6</sub> alkenyl-carbonyl which may be substituted by phenyl or is benzoyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, nitro, cyano, C<sub>1-4</sub> alkoxy and C<sub>1-4</sub> alkylthio,

20 R<sup>6</sup> is hydrogen or halogen,  
R<sup>7</sup> is hydrogen or halogen or C<sub>1-2</sub> alkyl,  
n is 0, 1 or 2, provided that n is 0 when R<sup>3</sup> is cyano, methyl-carbonyl, methoxy-thiocarbonyl or ethoxy-thiocarbonyl,

25  $\sim$  is a single bond of Anti form or of Syn form,  
R<sup>8</sup> is C<sub>1-6</sub> alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, cyano, C<sub>1-4</sub> alkoxy, C<sub>1-4</sub> alkoxy-carbonyl and phenoxy or is C<sub>2-6</sub> alkenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen and phenyl, or is phenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, nitro, cyano, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy and C<sub>1-4</sub> alkylthio, or is C<sub>3-6</sub> cycloalkyl which may be substituted by C<sub>1-4</sub> alkyl, or is C<sub>1-6</sub> alkyl-carbonyl or C<sub>1-6</sub> alkoxy-carbonyl, or hydrogen,

30 R<sup>9</sup> is C<sub>1-6</sub> alkyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, phenyl 4-nitrophenyl, trimethylsilyl and C<sub>3-6</sub> cycloalkyl, or is C<sub>3-6</sub> cycloalkyl, or C<sub>2-6</sub> alkenyl which may be substituted by phenyl or is C<sub>3-6</sub> alkynyl,

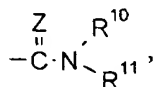
R<sup>10</sup> is hydrogen or C<sub>1-4</sub> alkyl,  
35 R<sup>11</sup> is hydrogen, C<sub>1-4</sub> alkyl which may be substituted by halogen or is phenyl which may be substituted by one or more than one substituent selected from the group consisting of halogen, C<sub>1-4</sub> alkoxy or C<sub>1-4</sub> haloalkoxy and

Z is oxygen or sulfur.

#### 4. Compounds of formula (I) according to claim 1, wherein

40 R<sup>1</sup> is fluorine, chlorine, bromine or iodine,  
R<sup>2</sup> is hydrogen, methyl, ethyl or n-propyl,  
R<sup>3</sup> is cyano, methyl, ethyl, propyl, isopropyl, n-butyl, sec-butyl, cyanomethyl, fluoromethyl, chloromethyl, difluoromethyl, trifluoromethyl, 2-fluoroethyl, 2-chloroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3-fluoropropyl, 3-chloropropyl, 2,2,3,3-tetrafluoropropyl, methoxymethyl, ethoxymethyl, trimethylsilylmethyl, vinyl, allyl, propargyl, methyl-carbonyl or ethoxy-thiocarbonyl,  
45 R<sup>4</sup> is hydrogen, methyl, ethyl, propyl, isopropyl, n-butyl, tert-butyl, allyl, phenyl, benzyl, -CO-R<sup>8</sup>, -CO-O-R<sup>9</sup> or

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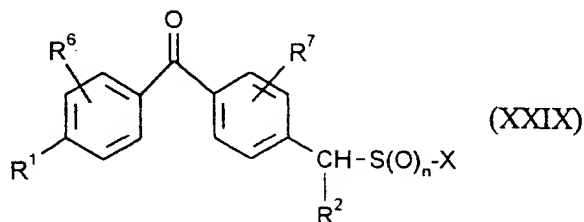
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R<sup>5</sup> is hydrogen, methyl, ethyl, propyl, isopropyl, n-butyl, tert-butyl, n-pentyl, n-hexyl, methoxymethyl, ethoxymethyl, methylthiomethyl, methylthioethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, 2-ethoxycarbonylethyl, difluoromethyl, 2-chloroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, cyanomethyl, cyanoethyl, vinyl, allyl, propargyl, phenyl, benzoyl, cinnamoyl, benzyl, 4-chlorobenzoyl, 4-methoxyben-

zoyl, formyl, methylcarbonyl, ethylcarbonyl, propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 2,2,2-trifluoroethylcarbonyl, 5-bromopentylcarbonyl, methoxymethylcarbonyl, methyloxalyl, ethyloxalyl, propyloxalyl, isopropyloxalyl, n-butyl-oxalyl, methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl, butoxycarbonyl, methoxyoxalyl, ethoxyoxalyl, propoxyoxalyl, butoxyoxalyl, cyclopropylcarbonyl, 1-methylcyclopropylcarbonyl, cyclopropylmethoxycarbonyl or 2-methoxyethoxycarbonyl, hydroxycarbonylethyl,

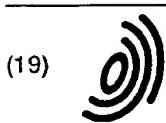
- 5  $R^6$  is hydrogen, fluorine or chlorine,  
 $R^7$  is hydrogen, bromine or methyl,  
 $n$  is 0, 1 or 2, provided that  $n$  is 0 when  $R^3$  is methyl-carbonyl or ethoxy-thiocarbonyl,  
 $\sim$  is a single bond of Anti form or of Syn form,  
 10  $R^8$  is methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, n-pentyl, n-hexyl, cyanomethyl, 2-chloroethyl, 3-chloropropyl, 4-chlorobutyl, methoxymethyl, 2-methoxyethyl, phenoxymethyl, ethoxycarbonylmethyl, vinyl, isopropenyl, 1-propenyl, 2,3,3-trifluoro-2-propenyl, phenyl, 4-chlorophenyl, 4-bromophenyl, 4-methylphenyl, 4-methoxyphenyl, styryl, cyclopropyl, cyclopentyl, cyclohexyl, 1-methylcyclopropyl, methylcarbonyl, ethylcarbonyl, propylcarbonyl, methoxycarbonyl, ethoxycarbonyl or propyoxycarbonyl, or hydrogen,  
 15  $R^9$  is methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, tert-butyl, sec-butyl, n-pentyl, neo-pentyl, 2-methylbutyl, n-hexyl, trimethylsilylmethyl, allyl, cyclopentyl, cyclohexyl, 2-methyl-2-propenyl, propargyl, 2-chloroethyl, 2,2,2-trifluoroethyl, 2,2,3,3-tetrafluoropropyl, cyclopropylmethyl, cyclohexylmethyl, benzyl or 4-nitrobenzyl  
 20  $R^{10}$  is hydrogen or methyl,  
 $R^{11}$  is hydrogen, methyl, ethyl, 2-chloroethyl, phenyl, 2-chlorophenyl, 2-methoxyphenyl or 4-trifluoromethoxyphenyl, and  
 $Z$  is oxygen or sulfur.

- 25 5. Pesticidal agents which comprise at least one compound of the formula (I) as claimed in claim 1.  
 6. The use of compounds of the formula (I) as claimed in claim 1 for combating pests.  
 7. A method of combating pests, wherein compounds of the formula (I) as claimed in claim 1 are allowed to act on  
 30 pests and/or their environment.  
 8. A process for the preparation of pesticides which comprises mixing compounds of the formula (I) as claimed in claim 1 with extenders and/or surfactants.  
 35 9. Compounds of the formula (XXIX):



wherein

- 50  $R^1$  is halogen,  
 $R^2$  is hydrogen or  $C_{1-4}$  alkyl,  
 $R^6$  is hydrogen or halogen,  
 $R^7$  is hydrogen, halogen or  $C_{1-2}$  alkyl,  
 $n$  is 0, 1 or 2,  
 55  $X$  is cyano, optionally substituted  $C_{1-4}$  alkyl,  $C_{2-4}$  alkenyl,  $C_{3-4}$  alkynyl,  $C_{1-4}$  alkyl-carbonyl,  $C_{1-4}$  alkoxy-thiocarbonyl or carboxamidine and their salts, provided that when  $X$  is cyano,  $C_{1-4}$  alkyl-carbonyl  $C_{1-4}$  alkoxy-thiocarbonyl or carboxamidine and their salts then  $n$  is 0.



(19)

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(11)

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(12)

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(21) Application number: 96106956.4

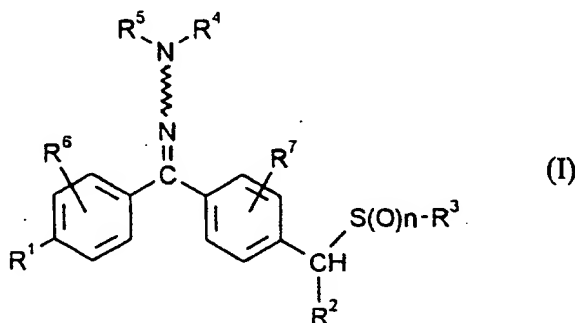
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(51) Int. Cl.<sup>6</sup>: C07C 323/48, C07C 317/28,  
C07C 323/52, C07C 337/04,  
C07F 7/10, A01N 33/26,  
C07C 323/22, C07C 335/32,  
C07C 317/24, C07C 331/04,  
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(54) Benzophenone hydrazone derivatives as insecticides

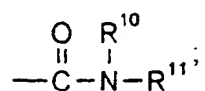
(57) Summary Of The Invention

Novel benzophenonehydrazone derivatives represented by the formula (I):



wherein, R<sup>1</sup> is halogen; R<sup>2</sup> is hydrogen or C<sub>1-4</sub> alkyl; R<sup>3</sup> is cyano, optically substituted C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>3-4</sub> alkynyl, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl; R<sup>4</sup> is hydrogen, phenyl, optionally substituted C<sub>1-6</sub> alkyl, optionally substituted C<sub>2-8</sub> alkenyl, -CO-R<sup>8</sup>, -CO-O-R<sup>9</sup> or

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R<sup>5</sup> is hydrogen, formyl, phenyl, optionally substituted C<sub>1-8</sub> alkyl, optionally substituted C<sub>2-8</sub> alkenyl, optionally substituted C<sub>3-8</sub> alkynyl, optionally substituted C<sub>1-8</sub> alkyl-carbonyl, optionally substituted C<sub>1-6</sub> alkyl-oxalyl, optionally substituted C<sub>1-8</sub> alkoxy-carbonyl, optionally substituted C<sub>1-8</sub> alkoxy-oxalyl, optionally substituted C<sub>3-8</sub> cycloalkyl-carbonyl, optionally substituted C<sub>2-8</sub> alkenyl-carbonyl or optionally substituted benzoyl; R<sup>6</sup> is hydrogen or halogen; R<sup>7</sup> is hydrogen, halogen or C<sub>1-2</sub> alkyl, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl; n is 0, 1 or 2, provided that n is 0 when R<sup>3</sup> is cyano, C<sub>1-4</sub> alkyl-carbonyl or C<sub>1-4</sub> alkoxy-thiocarbonyl, is a single bond of Anti form or of Syn form.

The benzophenonehydrazone derivatives of the formula (I) have excellent insecticidal activities.



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 96 10 6956

| DOCUMENTS CONSIDERED TO BE RELEVANT  |   |   |  |
|--|---|---|--|
| Category   | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim                                   | CLASSIFICATION OF THE APPLICATION (Int.Cl.6)         |
| D,X  | EP 0 355 832 A (SUMITOMO CHEMICAL CO) 28 February 1990<br>* claims *          | 2,5-8   | C07C323/48<br>C07C317/28<br>C07C323/52<br>C07C337/04 |
| D,X  | EP 0 003 913 A (BOOTS CO LTD) 5 September 1979<br>* claims *                  | 2,5-8   | C07F7/10<br>A01N33/26<br>C07C323/22<br>C07C335/32    |
| X,D  | EP 0 566 534 A (CIBA GEIGY AG) 20 October 1993<br>* claims *                  | 2,5-8   | C07C317/24<br>C07C331/04                             |
| D  | & JP 06 025 134 A   |   |  |
| X,D  | EP 0 581 725 A (CIBA GEIGY AG) 2 February 1994<br>* claims *                  | 2,5-8   |  |
| D  | & JP 06 184 079 A   |   |  |
|  |   |   | TECHNICAL FIELDS SEARCHED (Int.Cl.6)                 |
|  |   |   | C07C   |
| The present search report has been drawn up for all claims   |   |   |  |
| Place of search<br>THE HAGUE   |   | Date of completion of the search<br>21 January 1997 | Examiner<br>Van Geyt, J                              |
| <p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone<br/>Y : particularly relevant if combined with another document of the same category<br/>A : technological background<br/>O : non-written disclosure<br/>P : intermediate document</p> <p>T : theory or principle underlying the invention<br/>E : earlier patent document, but published on, or after the filing date<br/>D : document cited in the application<br/>L : document cited for other reasons<br/>* : member of the same patent family, corresponding document</p> |   |   |  |

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